# Service Manual

## XGA COLOR MONITOR

## Model : 719B-3/719BF-3

DAEWOO

DAEWOO LUCOMS CO., LTD.

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# SAFETY PRECAUTIONS

**CAUTION**: No modifications of any circuits should be attempted. Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines.

## ◆ Safety Check

Care should be taken while servicing this analog color display because of the high voltages used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

## ◆ Fire & Shock Hazard

- Insert an isolation transformer between the analog color display and AC power line before servicing the chassis.
- When servicing, pay close attention to the original lead dress especially in the high voltage circuit area; if a short circuit is found, replace all parts which have been overheated as a result of the short circuit.
- All the protective devices must be reinstalled per original design.
- Soldering must be inspected for possible cold solder points, frayed leads, damaged insulation, solder splashes or sharp solder points. Be certain to remove all foreign materials.

## ◆ Implosion Protection

Picture tube in this monitor employs intergral implosion protection system, but care should be taken to avoid damage and scratching during installation.
Only use same type replacement picture tubes.

**IMPORTANT SAFETY NOTICE**: There are special components used in this analog color display, which are important for safety. These parts are shaded on the schematic diagram and on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-Ray, shock, fire or other hazards. Do not modify the original design without getting written permission from DAEWOO LUCOMS CO., LTD. or this will void the original parts and labor warranty.

## ◆ X-Ray

**WARNING**: The only potential source of X-Ray is the picture tube. However when the high voltage circuitry is operating properly, there is no possibility of an X-Ray problem. The basic precaution which must be exercised is to keep the high voltage at the following factory recommended level.

**NOTE**: It is important to use an accurate, periodically, calibrated high voltage meter.

- To measure the high voltage, use a high-impedance high-voltage meter. Connect(-) to chassis and (+) to the CRT anode button.
- Set the Contrast & Brightness Control to the minimum on OSD Menu.
- Measure the high voltage. The high voltage meter should indicate the following factory recommended levels.
- If the upper meter indication exceeds the maximum level, immediate service is required to prevent the possibility of premature component failure.
- To prevent X-Ray possibility, it is essential to use the specified picture tube.
- The normal high voltage is 25.5KV or below and must not exceed 29KV at zero beam current at rated voltage.

# GENERAL SAFETY INFORMATION

## ◆ Terms in the manual

CAUTION Statements identify conditions or practices that could result in damage to the equipment or other property.

WARNING Statements identify conditions or practices that could result in personal injury or loss of life.

## ◆ Terms as marked on equipment

CAUTION Statements indicate a personal injury hazard not immediately accessible as one reads the marking or a hazard which is properly included on the equipment itself.

WARNING Statements are clearly concerning indicated personal injury hazards.

## ◆ Symbols in the manual

The symbols indicate where applicable cautionary or other information is to be found.

## ◆ Symbols as marked on equipment

Protective GROUND terminal

## ◆ High Voltage Warning And Critical Component Warning Label

The following warning label is on the CRT PWB shield case inside the unit.

**Warning:** This product includes critical mechanical and electrical parts which are essential for x ray protection. For continued safety, replace critical components that are indicated in the service manual with exact replacement parts given in the parts list.
Operating high voltage with this product is 29Kv at minimum brightness. Refer to service manual for measurement procedures and proper service adjustments.

# SERVICING PRECAUTIONS

**CAUTION:** Before servicing instruments covered by this service manual, its supplements, and addendum, please read and follow the SAFETY PRECAUTIONS of this manual.

**NOTE:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 1 of this manual, always follow the safety precautions. Remember: Safety First.

## ◆ General Servicing Precautions

1. Always unplug the AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
   b. Disconnecting or reconnecting any electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

   **CAUTION:** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in a explosion.

   d. Discharging the picture tube anode.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM. etc.) equipped with a suitable high voltage probe. Do not test high voltage by “drawing an arc”.

3. Discharge the picture tube anode only by: (a) first connecting one end of an insulated clip lead to the degaussing or line grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touching the other end of the insulated clip lead to the picture tube anode button, using an insulating handle to avoid personal contact with high voltage.

4. Do not any spray chemicals on or near this instrument, or any of its assemblies.

5. Unless otherwise specified in this service manual, only clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick, or comparable nonabrasive applicator: 10% (by volume) Aceton and 90% (by volume) isopropyl alchohol (90%-99% strength).

   **CAUTION**: This is a flammable mixture. Unless specified in this service manual, lubrication of contacts is not required.

6. Do not damage any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.

7. Do not apply AC power to this instrument and/or any other of its electrical assemblies unless all the solid-state device heat sinks are correctly installed.

8. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

9. Only use the test fixtures specified in this service manual with this instrument.

   **CAUTION**: Do not connect the test fixture ground strap to any heatsink in this instrument.

## ◆ Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity.
Such components are commonly called Electrostatically Sensitive (ES) Devices.
The typical examples of ES devices are integrated circuits, some field-effect transistors, and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, wipe off any electrostatic charge on your body by touching any known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device which should be removed for potential shock reasons prior to applying power to the unit under testing conditions.

2. After removing the electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil to prevent electrostatic charge buildup or exposure to the assembly.

3. Only use a grounded-tip soldering iron to solder or unsolder ES devices.

4. Only use an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate enough electrical charges to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate enough electrical charges to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

7. Immediately before removing the protective material from the leads of replacement ES devices, touch the protective material to the chassis or circuit assembly into which the device will be installed.

> **CAUTION:** Be sure that no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily movements when handling unpackaged replacement ES devices. (Otherwise harmful motion such as the brushing together clothes fabric or the lifting your foot from a carpeted floor can generate enough static electricity to damage ES devices).

## ◆ General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron with appropriate tip size and shape that will maintain tip temperature between a 550°F-660°F (288°C-316°C) range.

2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.

3. Keep the soldering iron tip clean.

4. Throughly clean the surface to be soldered. Use a small wire-bristle (0.5 inch or 1.25cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following soldering technique:
   a. Allow the soldering iron tip to reach normal temperature (550°F to 660°F or 288°C to 316°C)
   b. Hold the soldering iron tip and solder strand against the component lead until the solder melts.
   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there until the solder flows onto and around both the component lead and the foil.
   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

> **CAUTION**: Work quickly to avoid overheating the circuit board printed foil.

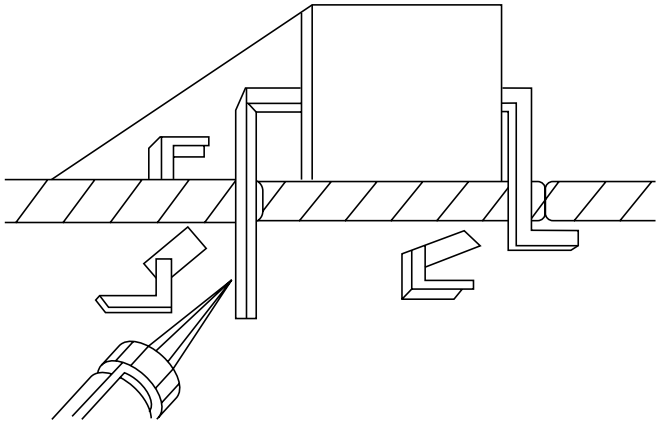


FIGURE 1. USE SOLDERING IRON TO PRY LEADS

## ◆ IC Removal/Replacement

Some utilized chassis circuit boards have slotted (oblong) holes through which the IC leads are inserted and then bent flat against the circuit foil. When holes are slotted, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 on the page under the title of general soldering guidelines.

## ◆ Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with desoldering braid before removing the IC.

## ◆ Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (lt is not necessary to reapply acrylic coating to the area).

## ◆ “Small-Signal” Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend the ends of each of three leads remaining on the circuit board into a “U” shape.
3. Bend the replacement transistor leads into a “U” shape.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the “U” with long nose pliers to ensure metal-to-metal contact, then solder each connection.

## ◆ Power IC, Transistor or Devices Removal/Replacement

1. Heat and remove all solders from the device leads.
2. Remove the heatsink mounting screw (if applicable).
3. Carefully remove the device from the circuit board.
4. Insert new device in circuit board.
5. Solder each device lead and then clip off excess lead.
6. Replace heatsink.

## ◆ Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicularly to the circuit board.
3. Observing diode polarity, wrap each lead out of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect the solder joints of the two “original” leads on the circuit board copper side. If they are not shiny, reheat them and apply additional solder if necessary.

# TECHNICAL INFORMATION

| Model | | 719B-3 | 719BF-3 |
|---|---|---|---|
| CDT Size | | 17-inch | 17-inch Flat |
| Diagonal visible image area | | 16.2-inch | 16.01-inch |
| Dot Pitch | | 0.27 mm | 0.24 mm |
| Synchronization | Horizontal | 30 - 70 KHz | |
| | Vertical | 50 - 160 Hz | |
| Plug and Play | | VESA DDC Compatible | |
| Power Saving | | EPA, VESA DPMS, Nutek Compliant | |
| Power Source | | 100-240 Vac, 50/60Hz (Free Voltage) | |
| Power Consumption | | 85W | |
| Dimension-W x H x D (set with stand) | | 410 x 402 x 425mm | 410 x 407 x 419mm |
| Weight-unpacked(lbs/Kg) | | 32.0/14.5 | 35.2/16 |
| Operating Temperature | | 10 ~ 40°C /50 ~ 104°F | |

# GENERAL INFORMATION

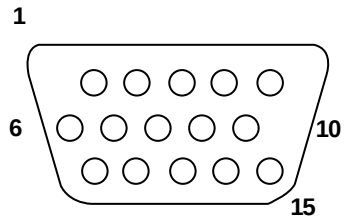
This color monitor automatically scans all horizontal frequencies from 30KHz to 70KHz, and all vertical frequencies from 50Hz to 160Hz. This color monitor supports IBM PC, PC/XT, PC/AT, personal System/2 (PS/2), Apple Macintosh, and compatible users crisp text and vivid color graphics display when using the following graphics adapters : (VGA, 8514/A, Super VGA, VESA and XGA and Apple Macintosh Video Card). And so, this color monitor has a maximum horizontal resolution of 1280 dots and a maximum vertical resolution of 1024 lines for superior clarity of display.
By accepting analog signal inputs which level is zero to 0.7 Volts. This color monitor can display and unlimited palette of colors depending on the graphics adapter and software being used.

## ◆ Abbreviations

| | |
|---|---|
| **ADJ** | Adjustment |
| **AFC** | Automatic Frequency Control |
| **CRT** | Cathode Ray Tube |
| **Def** | Deflection |
| **D.Y** | Deflection Yoke |
| **FBT** | Flyback Transformer |
| **H.SYNC** | Horizontal Synchronization |
| **OSC** | Oscillator |
| **P.S.U** | Power Supply Unit |
| **PWA** | Printed Circuit Board Wiring Assembly |
| **R.G.B** | Red, Green, Blue |
| **V.Sync** | Vertical Synchronization |

# PIN CONNECTOR

| Pin | Signal |
|---|---|
| 1 | Red |
| 2 | Green |
| 3 | Blue |
| 4 | GND |
| 5 | GND |
| 6 | GND - Red |
| 7 | GND - Green |
| 8 | GND - Blue |
| 9 | +5Vdc(option) |
| 10 | GND - H.Sync |
| 11 | GND - V.Sync |
| 12 | Bi-directional Data (SDA) |
| 13 | Horizontal Sync |
| 14 | Vertical Sync (VCLK) |
| 15 | Data Clock (SCL) |




Arrangement of 15-pin D-sub connector

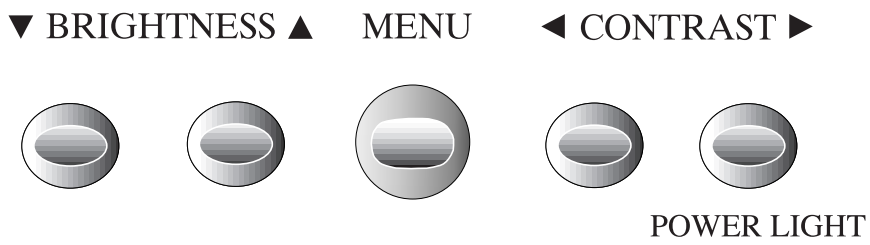
# CAUTIONS FOR ADJUSTMENT AND REPAIR

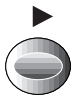
- Degaussing is always required when adjusting purity or convergence.
- The white balance adjustment has been done by a color analyzer in factroy. The adjustment procedure, described in the service manual is made by a visual check.
- Allow 20 minutes warm-up time for the display before checking or adjusting only electrical specification or function.
- Reform the leadwire after any repair work.

## ◆ Caution For Servicing

- In case of servicing or replacing CRT, high voltage sometimes remains in the anode of the CRT. Completely discharge high voltage before servicing or replacing CRT to prevent a shock to the serviceman.

## 719B-3 Control Panel



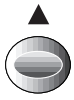
POWER LIGHT

- Move cursor to the right window on the OSD window.
- Increase the value of any selected function.
- While the OSD screen is off, you can adjust the screen brightness according to each situation.

- Move cursor to the left window on the OSD window.
- Decrease the value of any selected function.

MENU

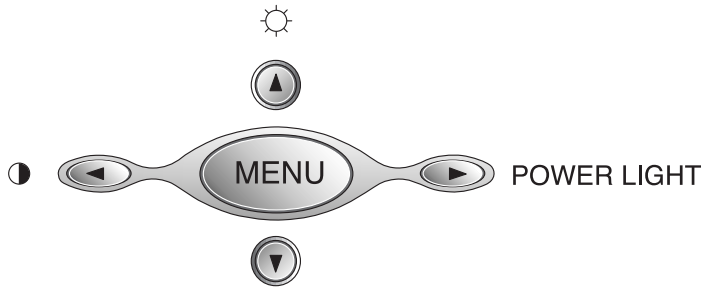
- Launch OSD(On-Screen Display) MENU window.



- Move cursor to the high window on the OSD window.
- Increase the value of V.size or V.center.

- Move cursor to the low window on the OSD window.
- Decrease the value of V.size or V.center.

## 719BF-3 Control Panel




POWER LIGHT

- Move cursor to the right window on the OSD window.
- Increase the value of any selected function.
- While the OSD screen is off, you can adjust the screen brightness according to each situation.

- Move cursor to the left window on the OSD window.
- Decrease the value of any selected function.

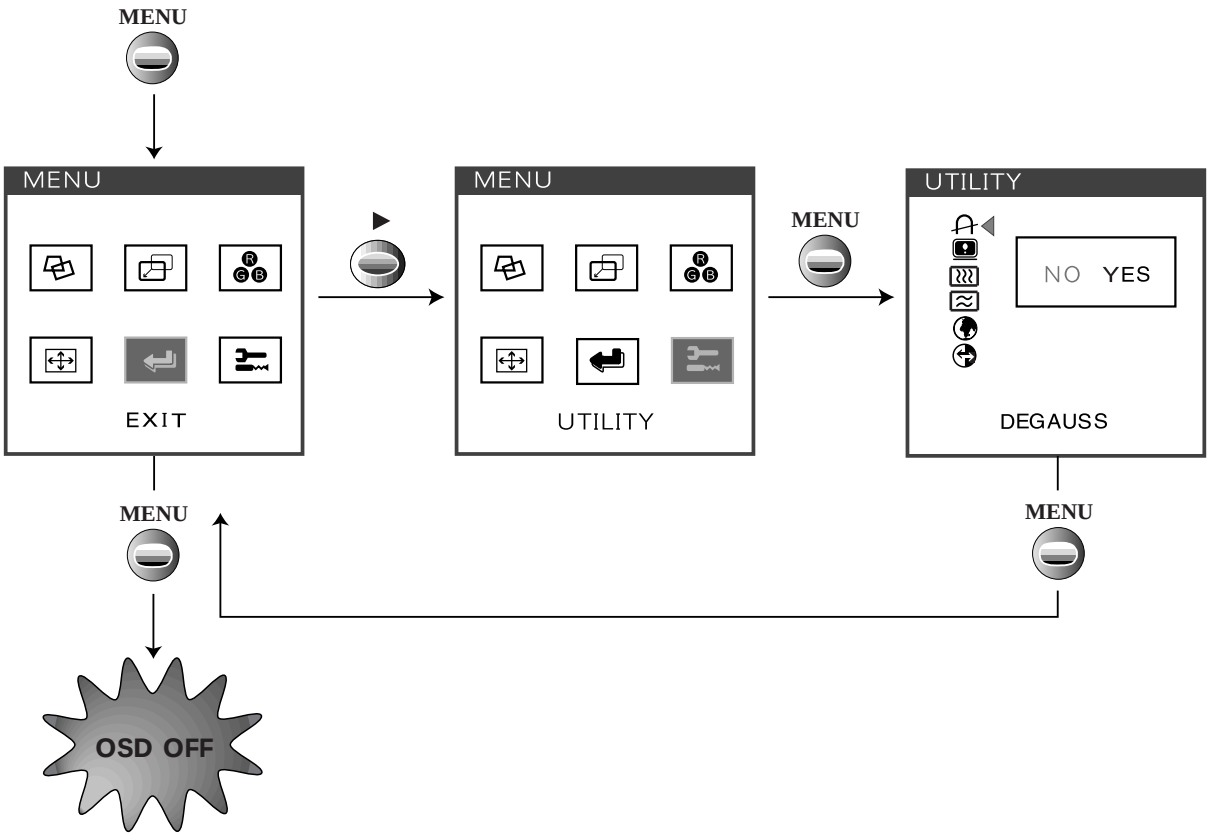
MENU

- Launch OSD(On-Screen Display) MENU window.

- Move cursor to the high window on the OSD window.
- Increase the value of V.size or V.center.

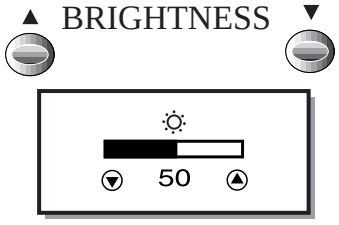
- Move cursor to the low window on the OSD window.
- Decrease the value of V.size or V.center.

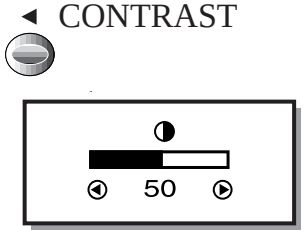
## 719B Key Process

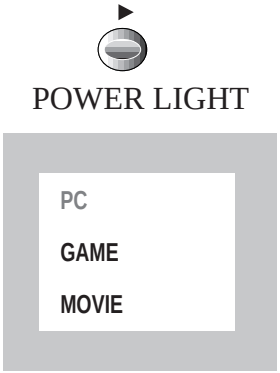



- When you choose the icon on the OSD window, you can exit the OSD screen.

## Hot Key



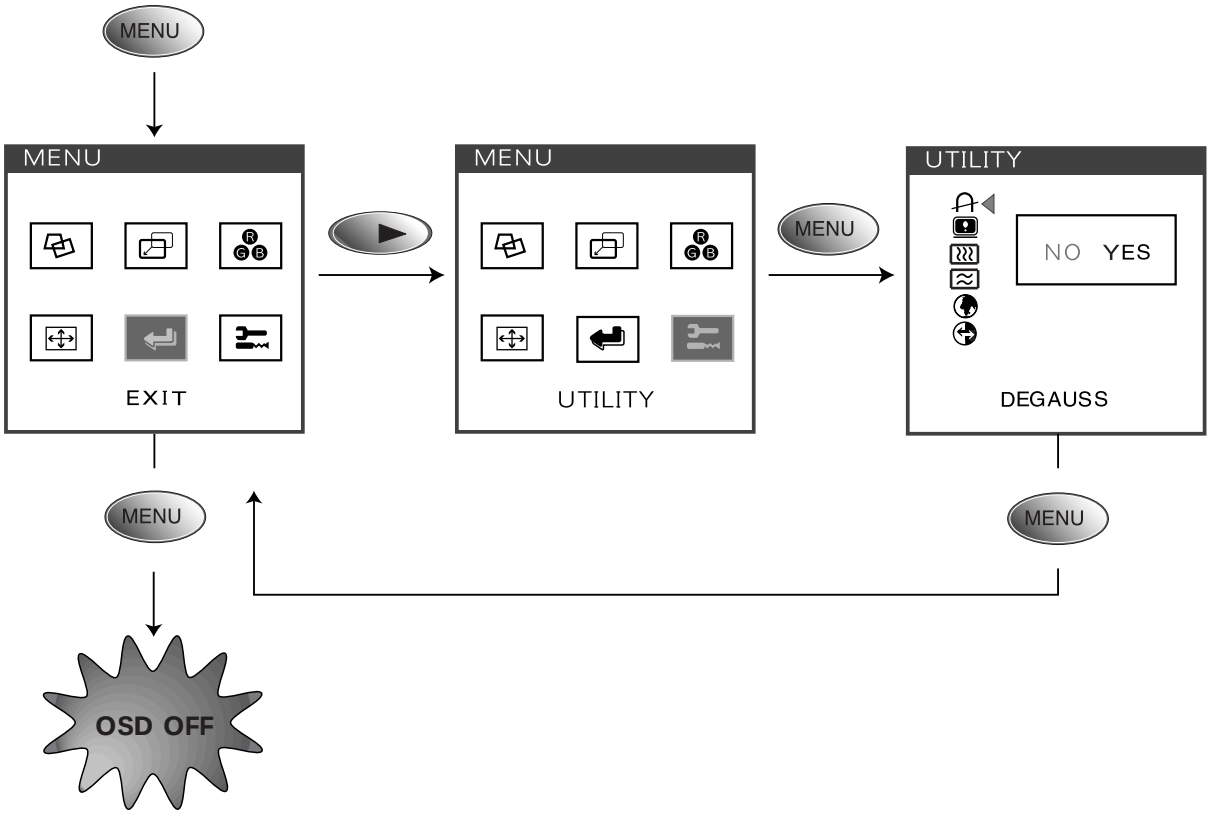




The screen brightens progressively by 10%.

If you carry out general PC works such as document edition on the Movie mode,you may shorten the life span of CRT. Thus,it is recommended to verify the selected mode before use.

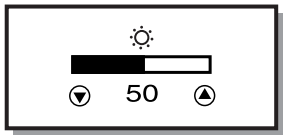
## 719BF Key Process



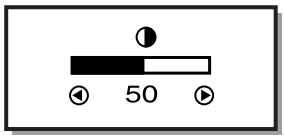

- When you choose the icon on the OSD window, you can exit the OSD screen.

## Hot Key

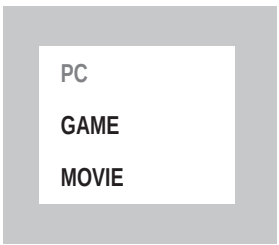
BRIGHTNESS




CONTRAST




POWER LIGHT




The screen brightens progressively by 10%.

If you carry out general PC works such as document edition on the Movie mode,you may shorten the life span of CRT. Thus,it is recommended to verify the selected mode before use.

## OSD Functions

| ICON | CONTROL | FUNCTIONS |
|---|---|---|
| | ***PINCUSHION*** | Adjust the left and right margins for more convex or more concave margins. |
| | ***TRAPEZOID*** | Adjust the trapezoid of the screen by moving the lines inward or outward. |
| | ***PARALLELOGRAM*** | Adjust the parallelogram when the screen is leaning left or right. |
| | ***PIN BALANCE*** | Adjust the side balance when the sides of the screen are bowed towards left or right. |
| | ***T. PIN CORNER*** | Adjust the pin corner top when the top sides of the screen are bowed. |
| | ***B. PIN CORNER*** | Adjust the pin corner bottom when the bottom sides of the screen are bowed. |
| | ***ROTATION*** | Adjust the rotation when the screen is tilted left or right (719BF only). |
| | ***H. CENTER & V. CENTER*** | Adjust the position of the display horizontally(left or right) and vertically (up or down). |
| | ***COLOR TEMP*** | Choose different preset color temperatures or set your own customized color parameters. |
| | ***RED GAIN*** | Adjust the red gain. |
| | ***GREEN GAIN*** | Adjust the green gain. |
| | ***BLUE GAIN*** | Adjust the blue gain. |
| | ***H. SIZE & V. SIZE*** | Adjust the width (horizontal size) and the height (vertical size) of the display. |
| | ***DEGAUSS*** | Degauss the display and restore image quality. |

| ICON | CONTROL | FUNCTIONS |
|---|---|---|
| | ***STATUS*** | Display horizontal & vertical frequency and polarity. |
| | ***H. MOIRE*** | Adjust the horizontal picture moire cancellation. |
| | ***V. MOIRE*** | Adjust the vertical picture moire cancellation. |
| | ***LANGUAGE*** | Select language for OSD (5 languages). |
| | ***RECALL*** | Reset the screen to the Factory Preset Display Settings. |

# ALIGNMENT PROCEDURE

## ◆ Standard Adjustment Conditions

1. Power source voltage : AC 100~240V, 50/60Hz
2. Aging : Take at least 20 minutes warm-up time.
3. Signals.
   Video : Analog 0.7Vpp 75Ω terminal positive polarity
   Synchronizing : TTL Level Negative/Positive Separate/Composite
   Deflection frequency
   Horizontal Frequency : 30KHz - 70KHz
   Vertical Frequency : 50Hz - 160Hz

## ◆ Pre-Adjustment

1. High Voltage Adjustment
   Adjust 26K Vdc between Anode cap and ground at a cross hatch pattern of 60KHz by using the factory mode.

## ◆ Method to launch the factory mode

Step 1. Turns off the monitor.

Step 2. Push the menu button and then push the power button at once.

## ◆ Main Adjustment

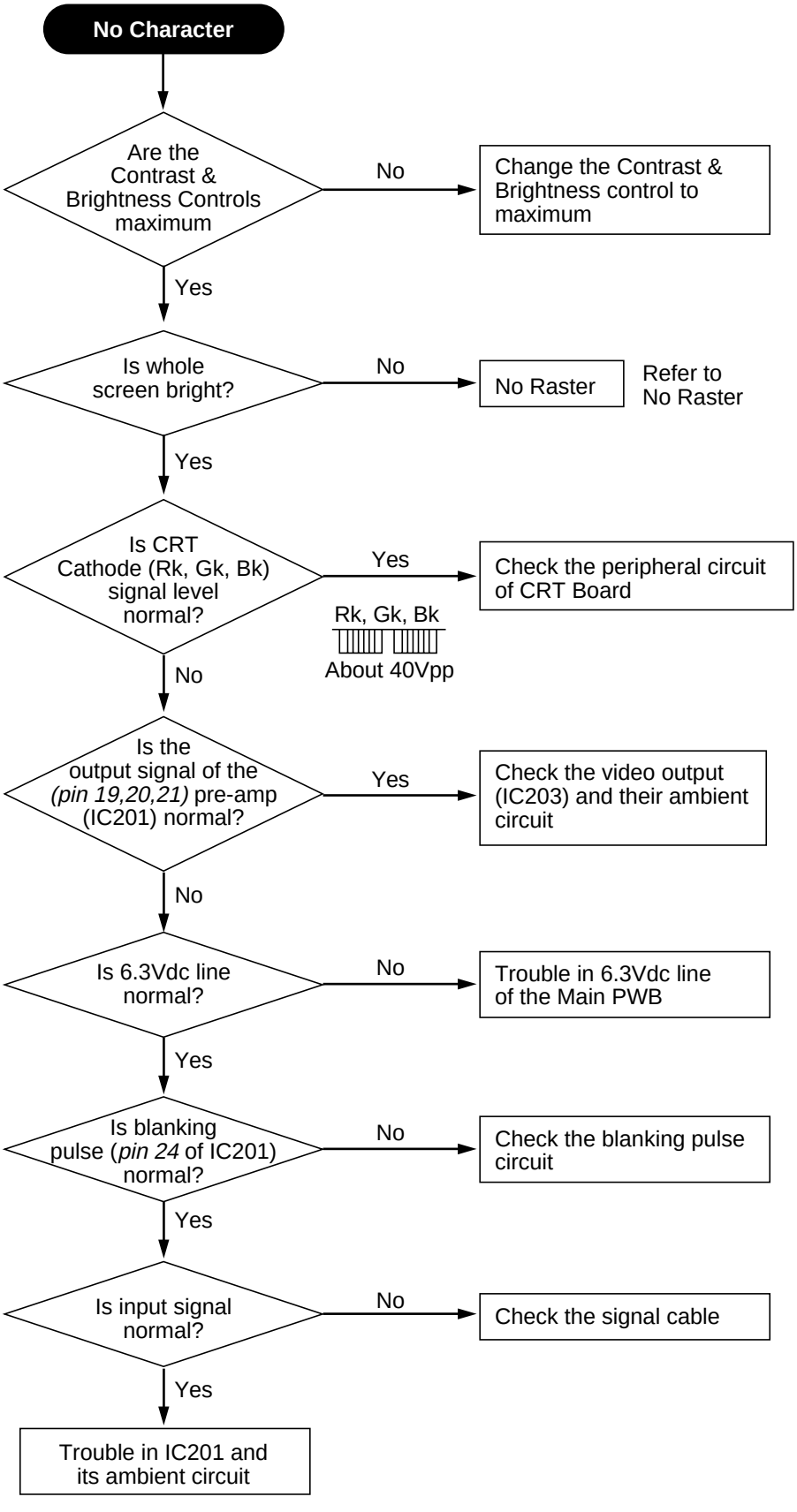
1. Setting the Controls
   Set the value of items as following.
   Contrast : Max. (OSD value up to 100)
   Brightness : Center (Set the OSD value to 50)
2. H.size, V.size, H.phase, V.position, Pincushion, Trapezoid
   Receive the cross hatch pattern of Factory preset mode.
   H.size, V.size, H.phase, V.position, Pincushion, Trapezoid are adjusted at each mode.
   In Factory, Auto Alignment was done at each mode. Therefore, Factory preset mode has it's own value according to each control.
3. Focus
   (a) Set brightness control to center and contrast control to MAX.
   (b) Receive all "H" character pattern of 60KHz mode signal.
   (c) Adjust the Focus control of FBT to obtain best Focus (static focus and Dynamic focus).
4. Geometric Distortion Adjustment
   (a) Receive the cross hatch pattern of VGA mode signal by using the signal generator.
   (b) Pin balance, Parallelogram are adjusted the best geometric status.
   (c) Repeat the adjustment at each mode.
5. White Balance Adjustment
   (a) Receive a full white pattern of 60KHz mode.
   (b) Set the bright control and contrast control to the maximum and receive the all black pattern.
   (c) Select a Temperature function on the R, G, B item of the OSD menu and select 9300.
   (d) If the screen luminosity is changed, adjust the sub brightness control to get the 0.6 ~ 0.8 Ft/L screen luminosity.
   (e) Select the R, G, B Bias on the OSD menu and adjust the ◄ / ► key to get the color coordinates in X=0.281, Y=0.311.
   (f) Set the brightness control to the maxium and contrast control to the maximum.

(g) Receive the small square white pattern about 50 x 50mm.
(h) Adjust the G-gain control to get the brightness to 50 Ft/L.
(i) Adjust the B-gain control to get the y cordinate to 0.311 ± 0.03.
(j) Adjust the R-gain control to get the x cordinate to 0.281 ± 0.03.
(k) Receive the full white pattern.
(l) Adjust the ABL control to get the brightness to 32 Ft/L.

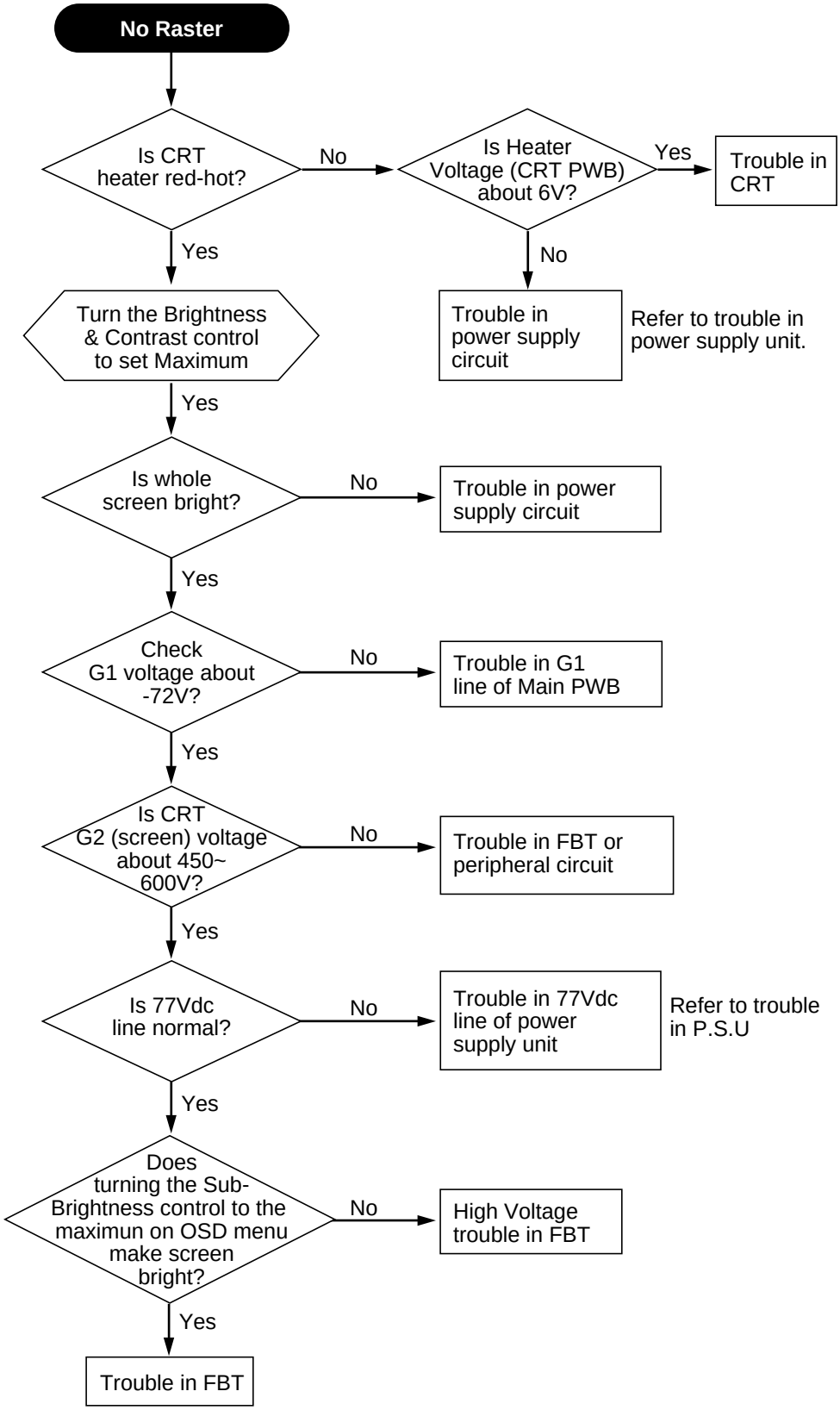
6. Static Convergence Adjustment
(a) Apply a magenta cross hatch pattern on display.
(b) Adjust the focus from the best over all focus on the display.
Also adjust the brightness to the desired condition.
(c) Vertical red and blue lines are converged by varying the angles between the two tabs of the 4-pole magnets.
(d) Horizontal red and blue lines are converged by varying the tabs together keeping the angle between them constant.
(e) Apply a yellow cross hatch pattern on the display.
(f) Vertical green and red lines are converged by varying the angle between the two tabs of the 6-pole magnets.
(g) Horizontal green and red lines are converged by varying the tabs together and keeping the angle between them constant.

# TROUBLESHOOTING HINTS

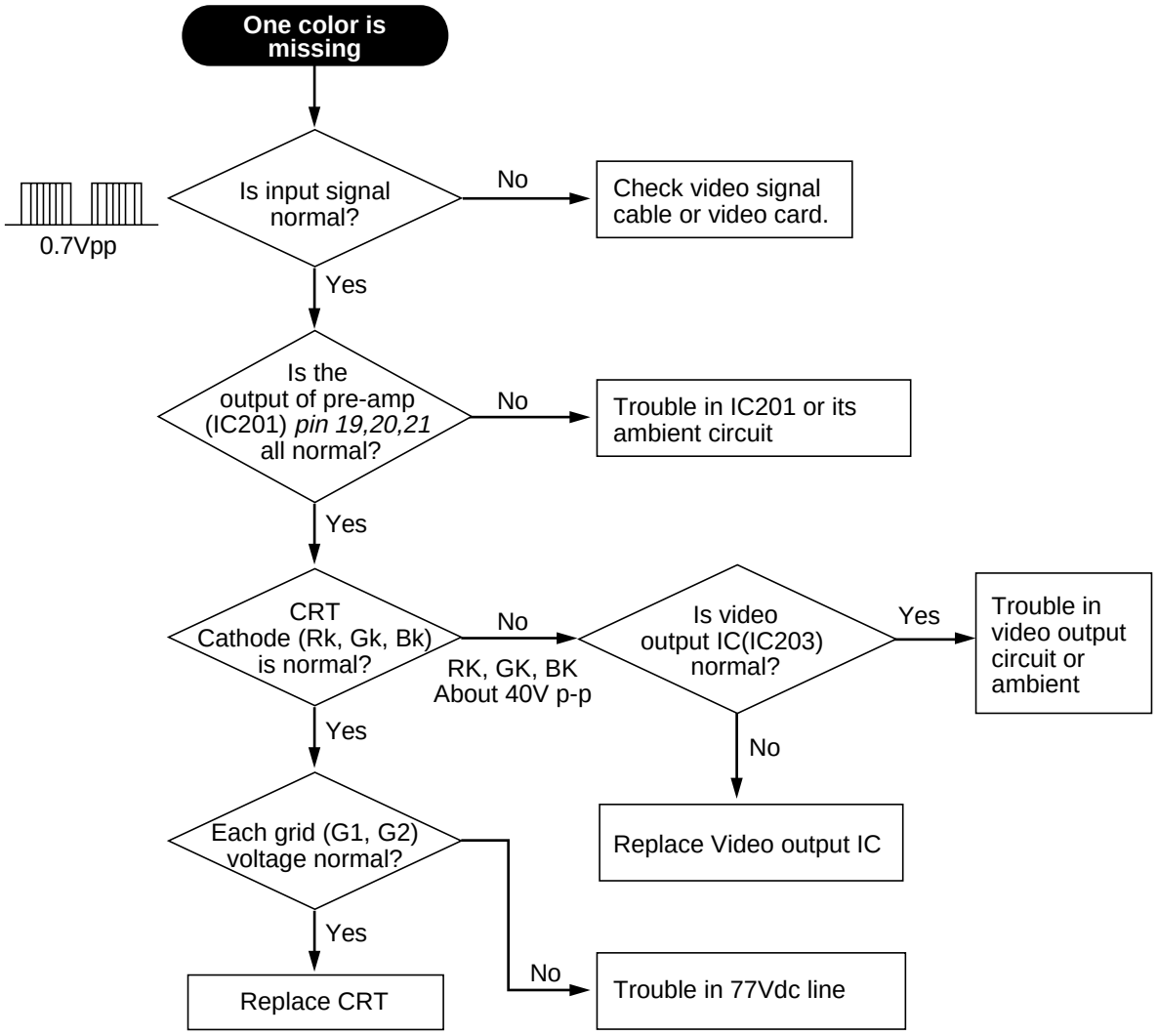
## 1. No Character



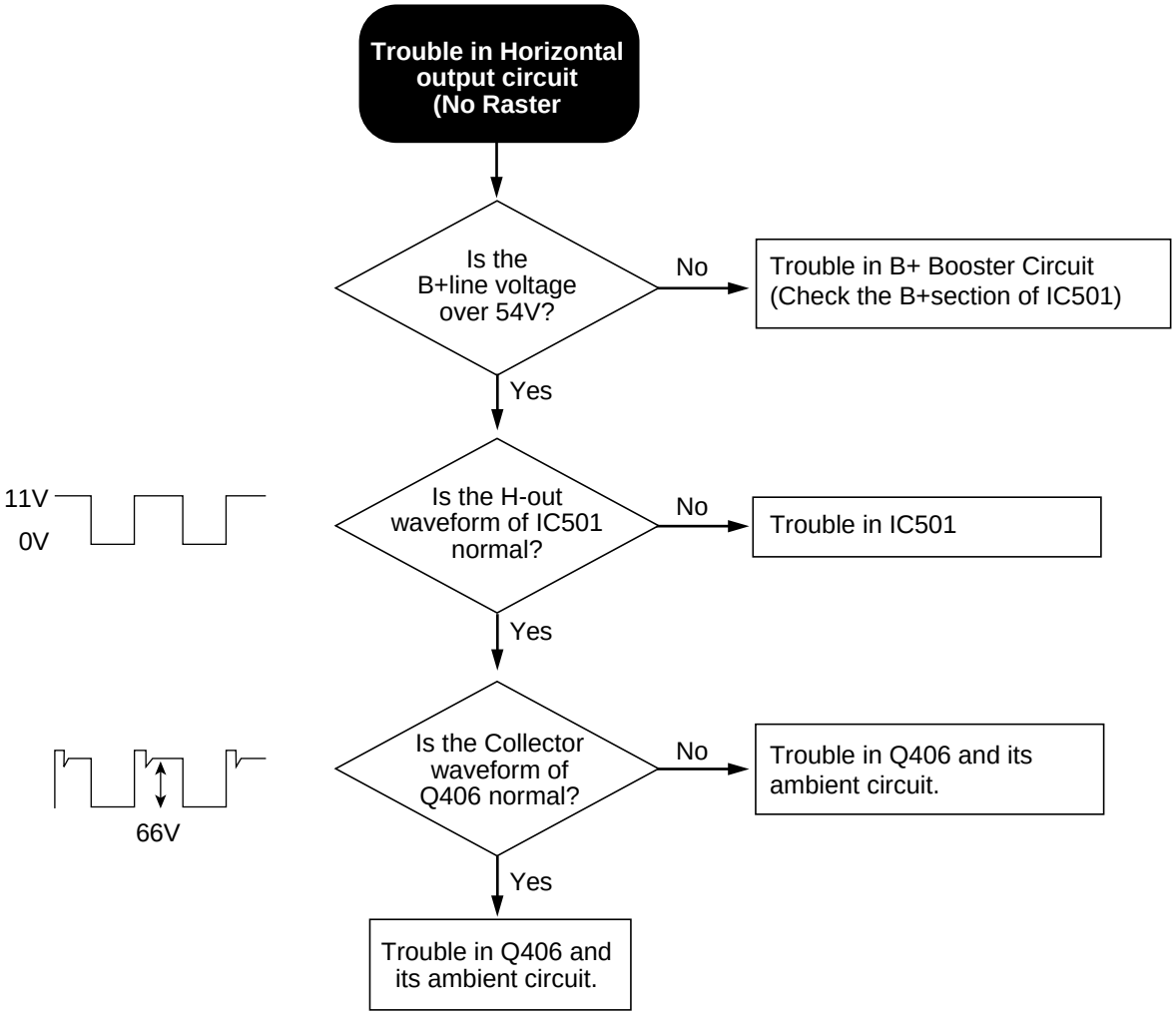
## 2. No Raster


No Raster
Is CRT heater red-hot?
No
Is Heater Voltage (CRT PWB) about 6V?
Yes
Trouble in CRT
Yes
No
Turn the Brightness & Contrast control to set Maximum
Trouble in power supply circuit
Refer to trouble in power supply unit.
Yes
Is whole screen bright?
No
Trouble in power supply circuit
Yes
Check G1 voltage about -72V?
No
Trouble in G1 line of Main PWB
Yes
Is CRT G2 (screen) voltage about 450~ 600V?
No
Trouble in FBT or peripheral circuit
Yes
Is 77Vdc line normal?
No
Trouble in 77Vdc line of power supply unit
Refer to trouble in P.S.U
Yes
Does turning the Sub-Brightness control to the maximun on OSD menu make screen bright?
No
High Voltage trouble in FBT
Yes
Trouble in FBT

## 3. A Missing Color

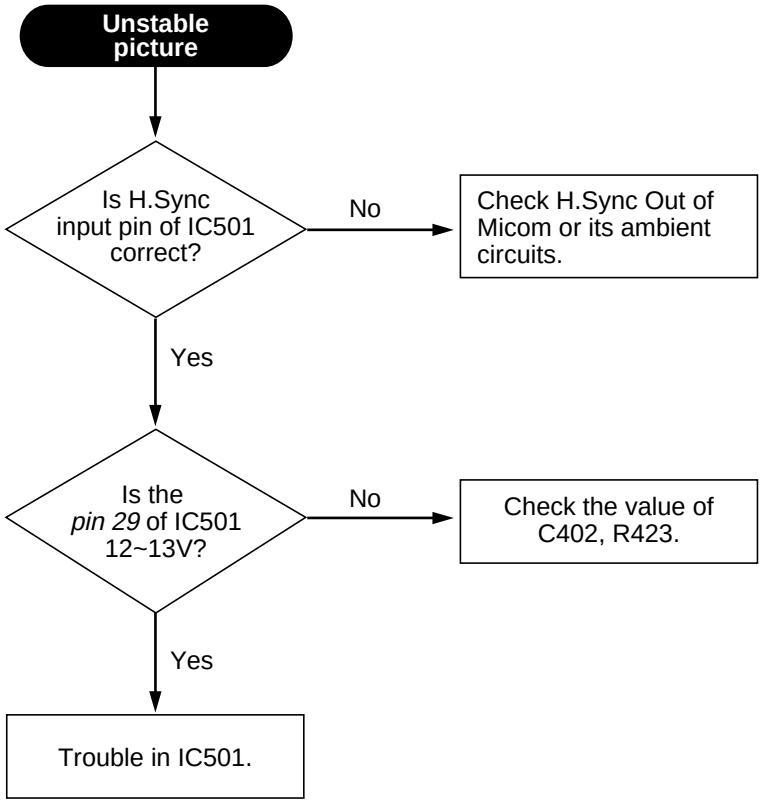


## 4. Horizontal Output Circuit

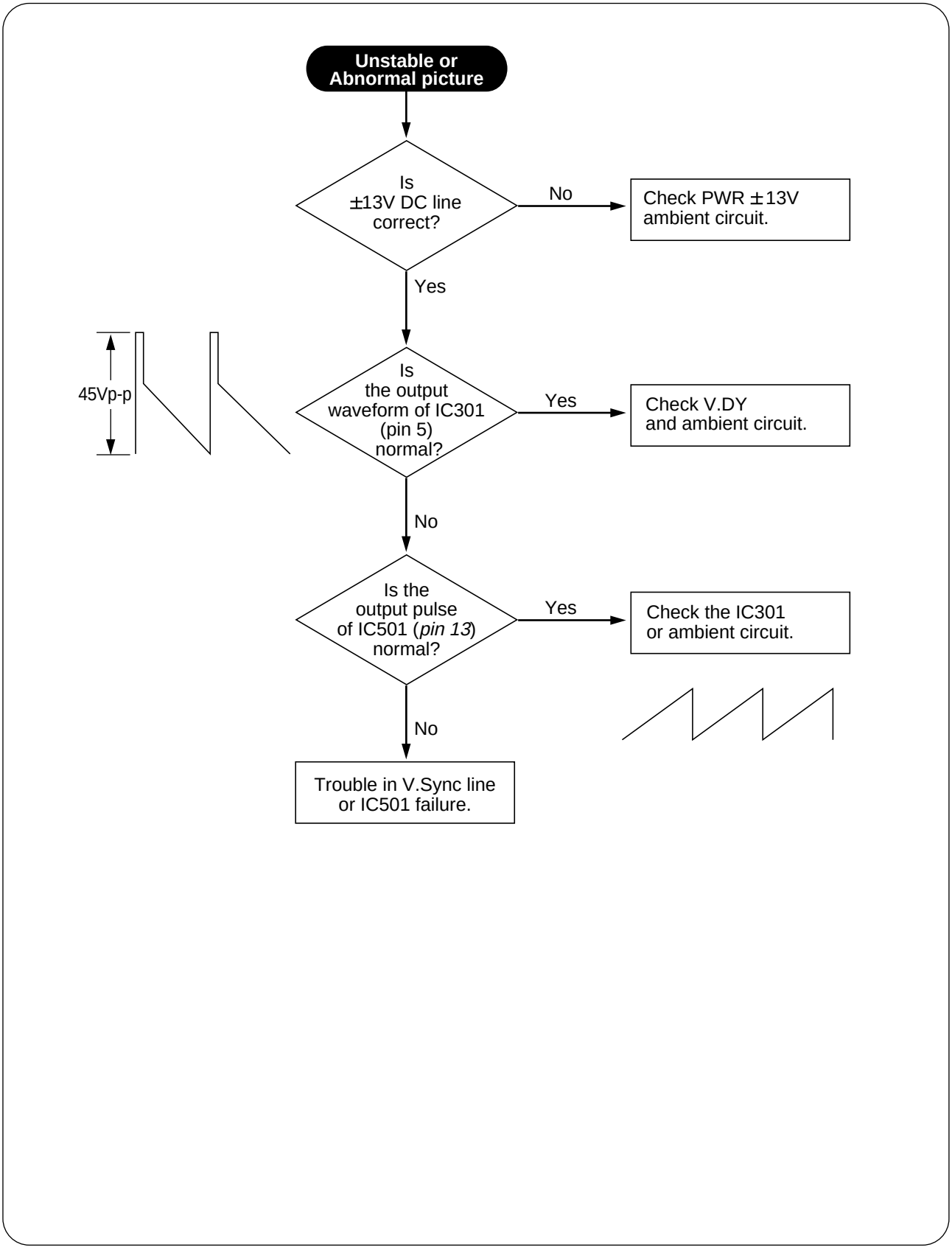


## 5. Unstable Picture

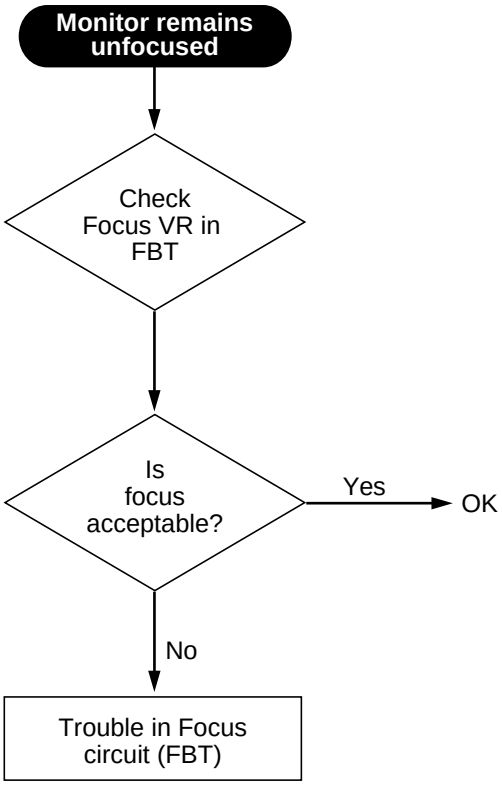
### 5-1. Horizontal



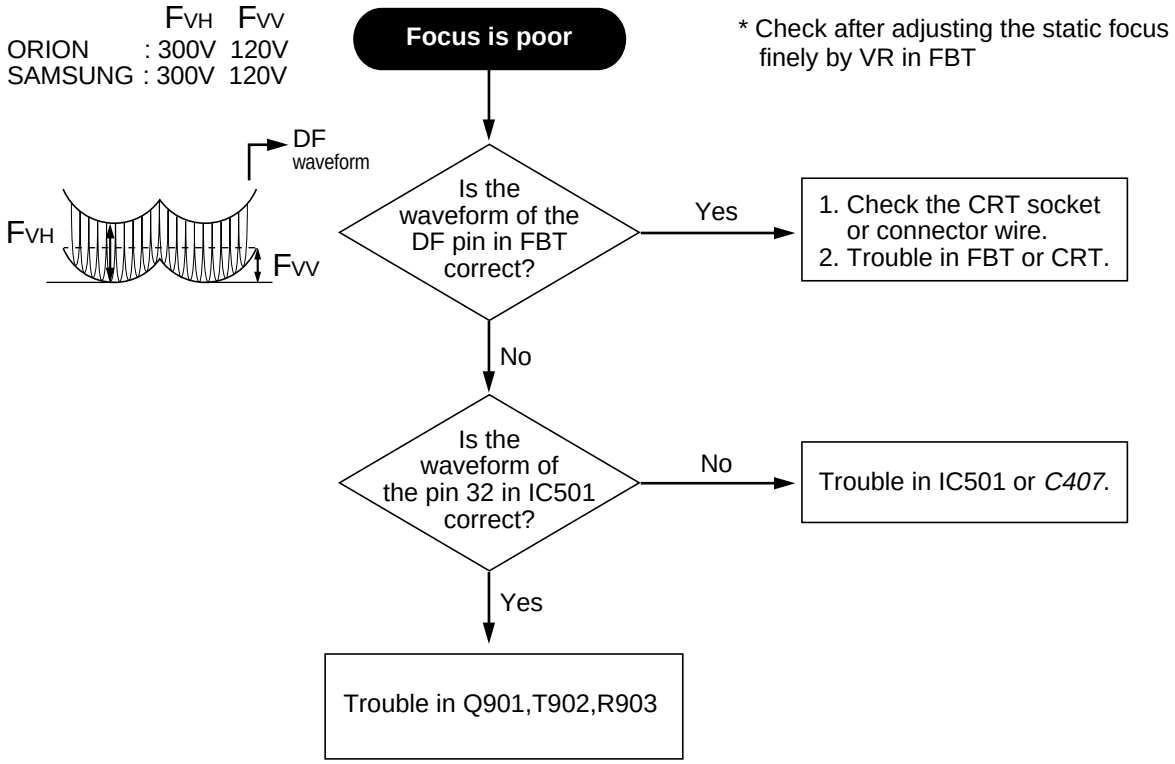
## 5-2. Vertical


Unstable or Abnormal picture
Is ±13V DC line correct?
No
Check PWR ±13V ambient circuit.
Yes
45Vp-p
Is the output waveform of IC301 (pin 5) normal?
Yes
Check V.DY and ambient circuit.
No
Is the output pulse of IC501 (pin 13) normal?
Yes
Check the IC301 or ambient circuit.
No
Trouble in V.Sync line or IC501 failure.

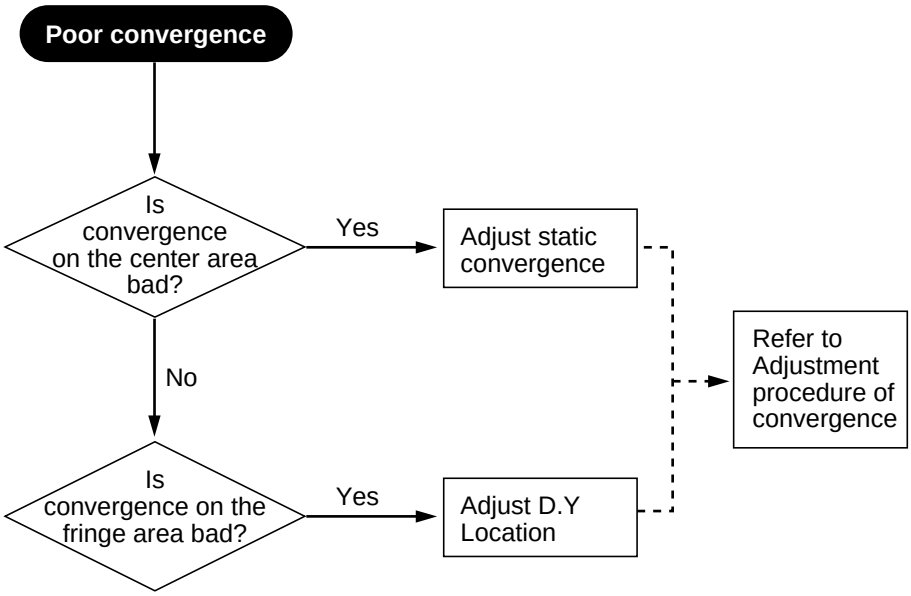
## 6. Focus


Monitor remains unfocused
Check Focus VR in FBT
Is focus acceptable?
Yes
OK
No
Trouble in Focus circuit (FBT)

## 6-1. Dynamic Focus

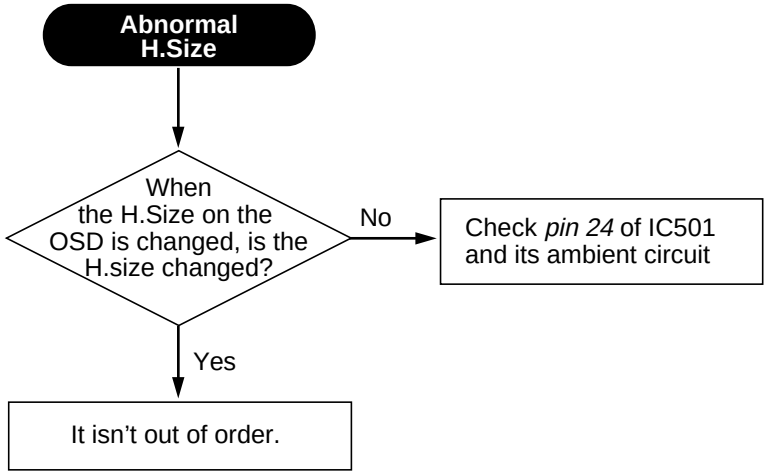

FVH FVV
ORION : 300V 120V
SAMSUNG : 300V 120V
Focus is poor
* Check after adjusting the static focus finely by VR in FBT
DF waveform
FVH
FVV
Is the waveform of the DF pin in FBT correct?
Yes
1. Check the CRT socket or connector wire.
2. Trouble in FBT or CRT.
No
Is the waveform of the pin 32 in IC501 correct?
No
Trouble in IC501 or C407.
Yes
Trouble in Q901,T902,R903

## 7. Convergence

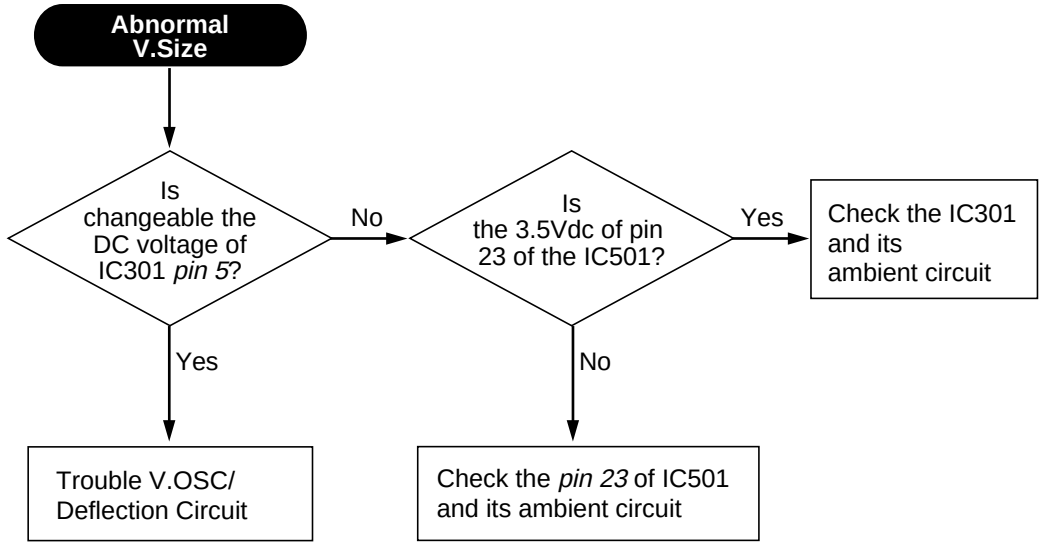


## 8. Abnormal Picture

### 8-1. Horizontal Size

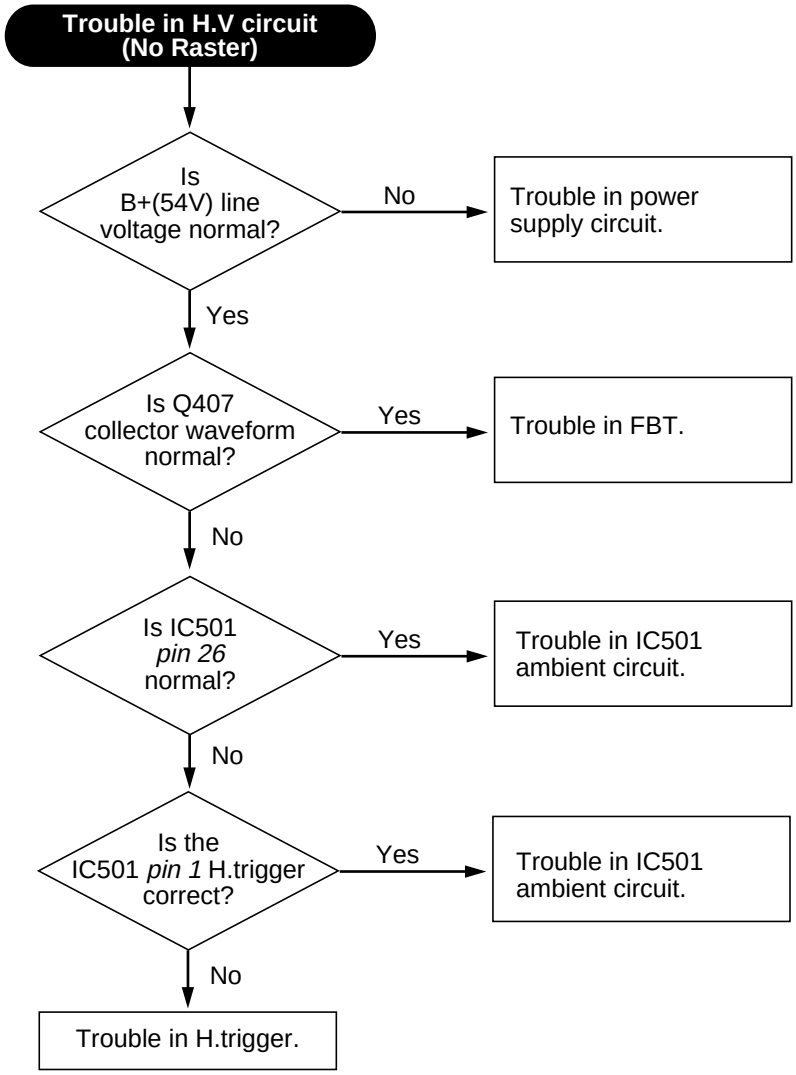

Abnormal H.Size
When the H.Size on the OSD is changed, is the H.size changed?
No
Check *pin 24* of IC501 and its ambient circuit
Yes
It isn't out of order.

## 8-2. Vertical Size

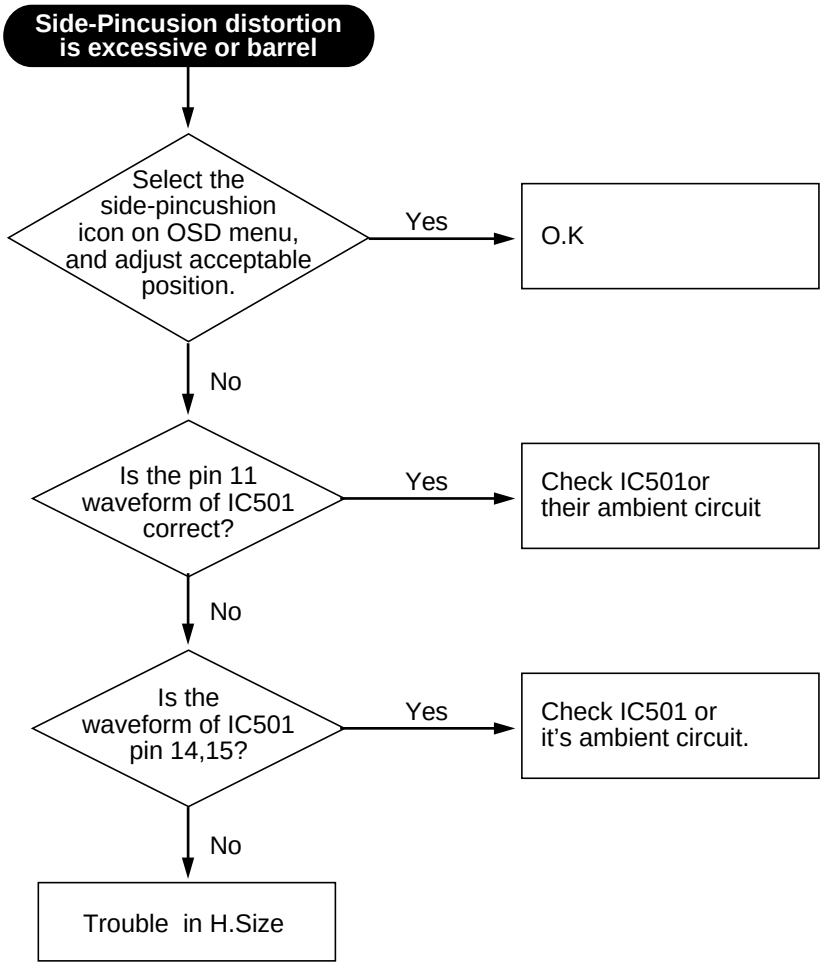

Abnormal V.Size
Is changeable the DC voltage of IC301 *pin 5*?
No
Is the 3.5Vdc of pin 23 of the IC501?
Yes
Check the IC301 and its ambient circuit
Yes
No
Trouble V.OSC/ Deflection Circuit
Check the *pin 23* of IC501 and its ambient circuit

Refer to V.OSC/Deflection circuit

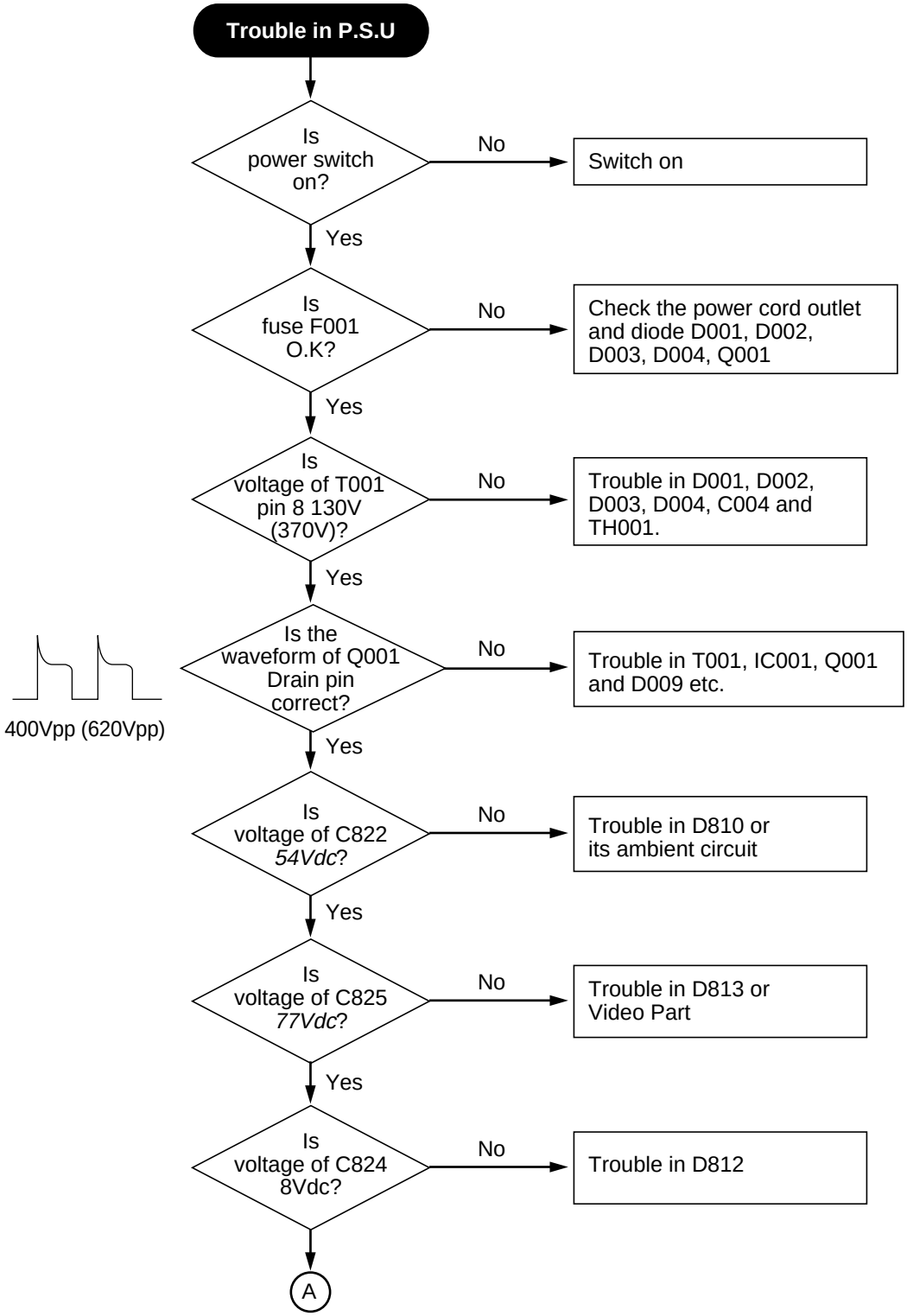
## 9. High Voltage Output Circuit

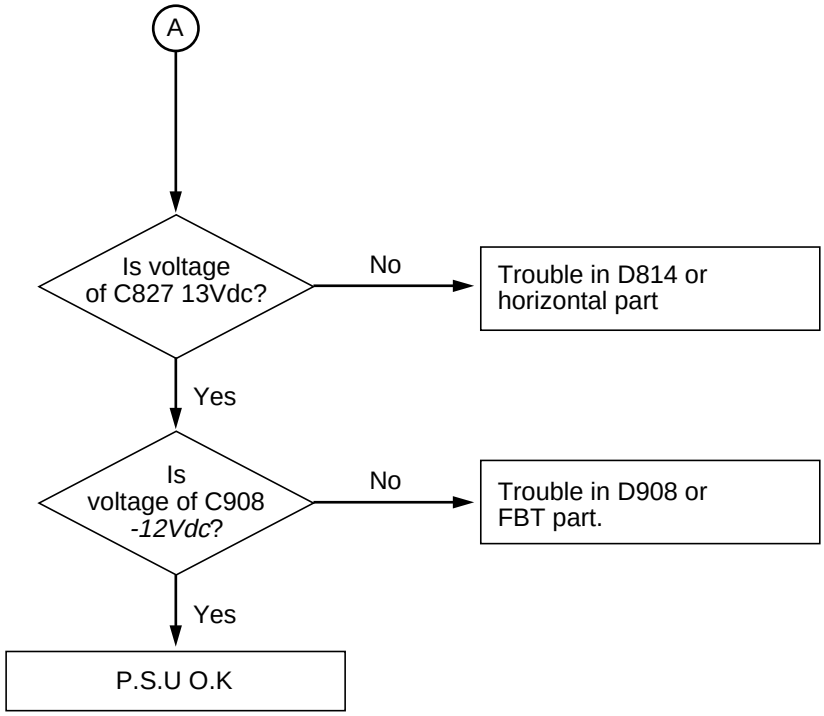


## 10. Side-Pincushion Circuit



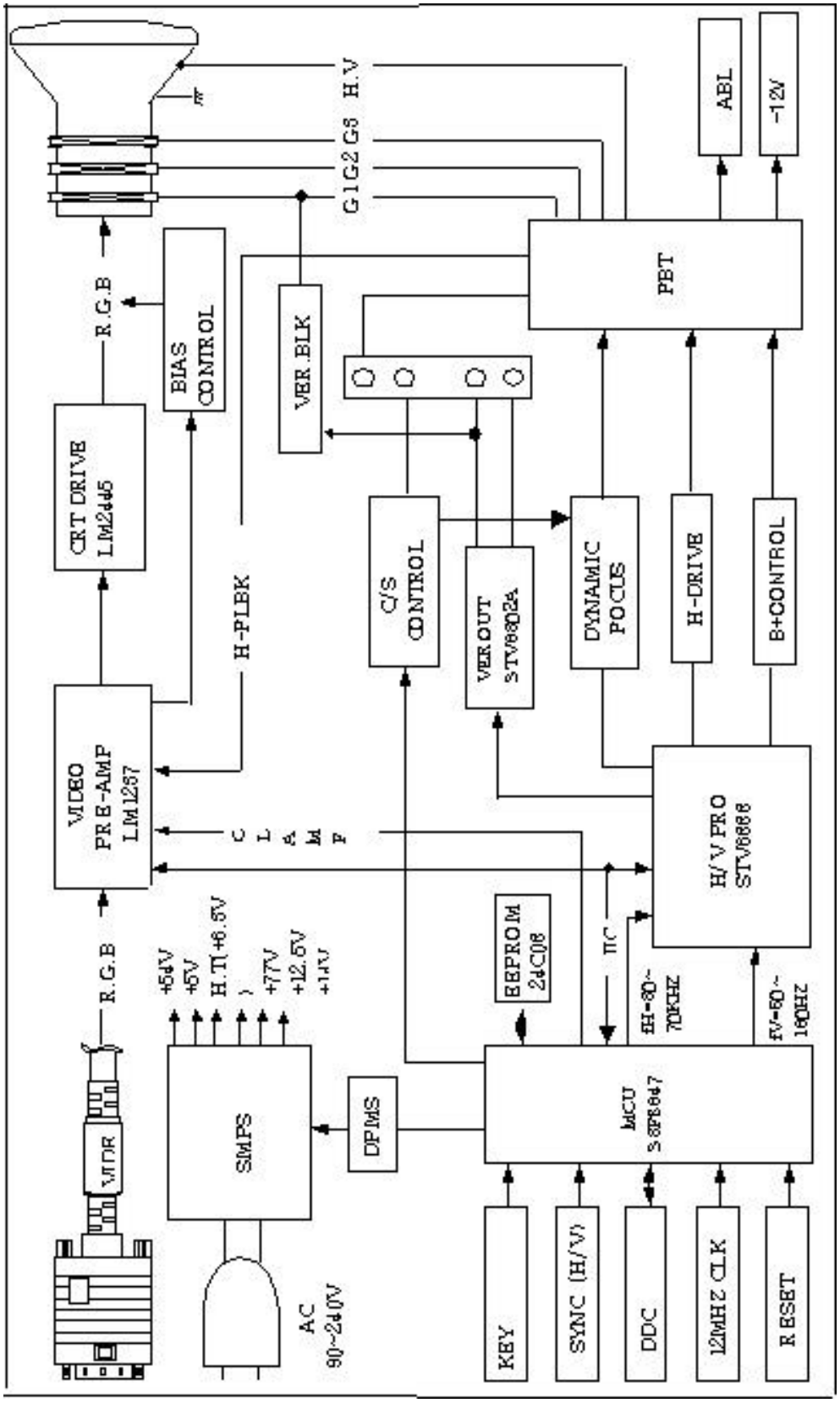
## 11. Power Supply Unit (P.S.U)




A
Is voltage of C827 13Vdc?
No
Trouble in D814 or horizontal part
Yes
Is voltage of C908 -12Vdc?
No
Trouble in D908 or FBT part.
Yes
P.S.U O.K

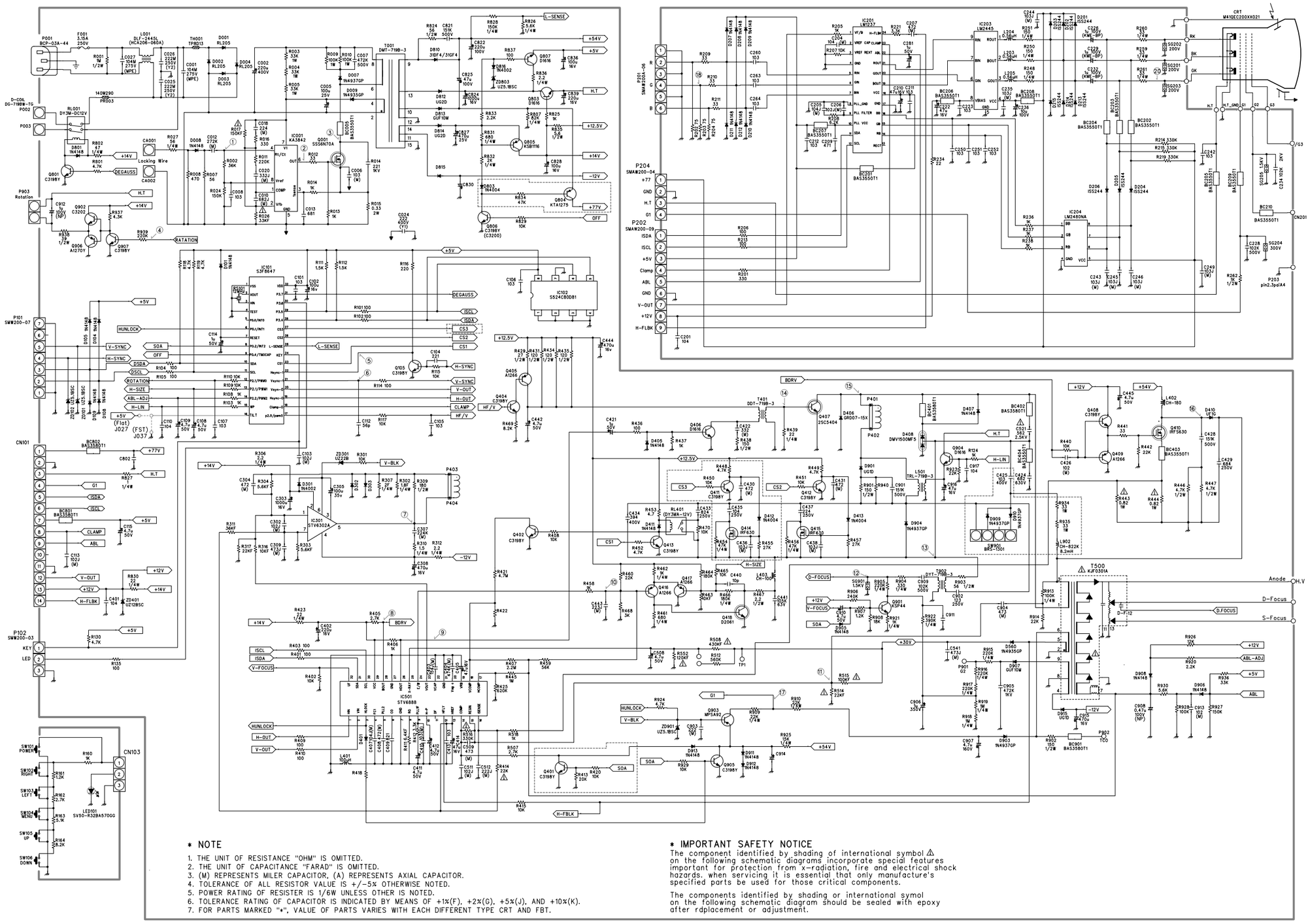
# BLOCK DIAGRAM

**719B-3/719BF-3**



# SCHEMATIC DIAGRAM

## 719B-3/719BF-3



### * NOTE

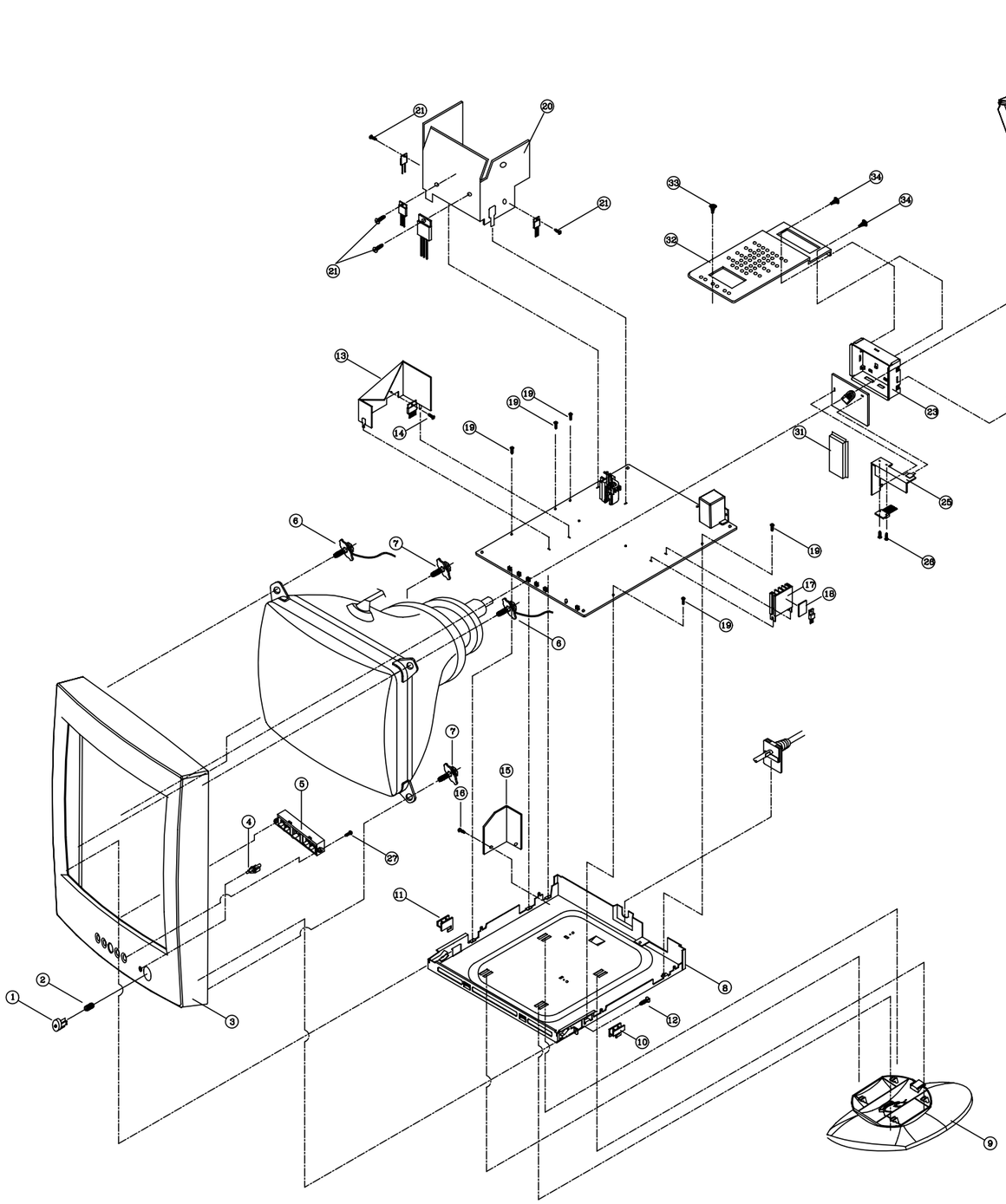
1. THE UNIT OF RESISTANCE "OHM" IS OMITTED.
2. THE UNIT OF CAPACITANCE "FARAD" IS OMITTED.
3. (M) REPRESENTS MILER CAPACITOR, (A) REPRESENTS AXIAL CAPACITOR.
4. TOLERANCE OF ALL RESISTOR VALUE IS +/-5% OTHERWISE NOTED.
5. POWER RATING OF RESISTER IS 1/6W UNLESS OTHER IS NOTED.
6. TOLERANCE RATING OF CAPACITOR IS INDICATED BY MEANS OF +1%(F), +2%(G), +5%(J), AND +10%(K).
7. FOR PARTS MARKED "*", VALUE OF PARTS VARIES WITH EACH DIFFERENT TYPE CRT AND FBT.

### * IMPORTANT SAFETY NOTICE

The component identified by shading of international symbol ⚠ on the following schematic diagrams incorporate special features important for protection from x-radiation, fire and electrical shock hazards. when servicing it is essential that only manufacture's specified parts be used for those critical components.

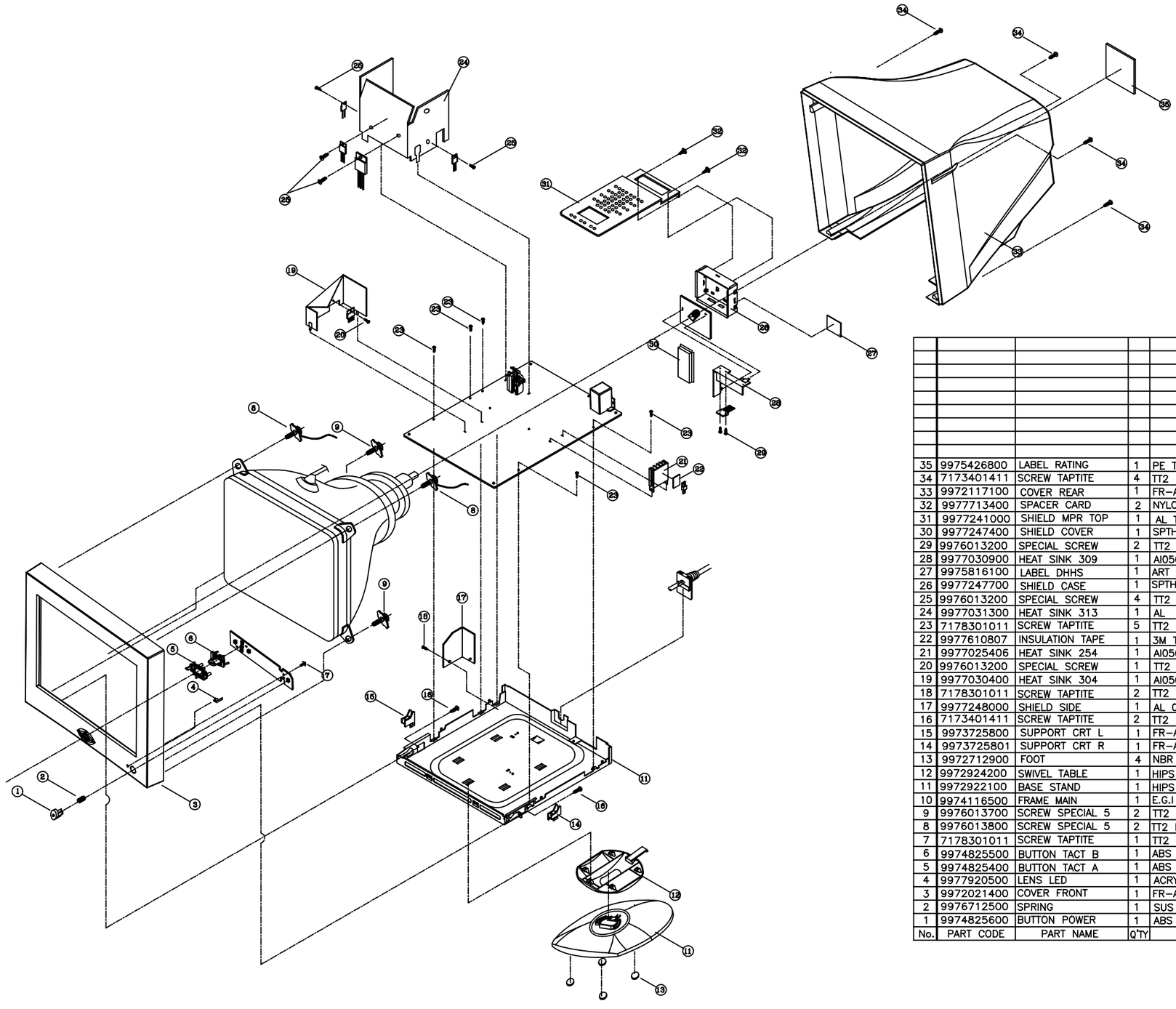
The components identified by shading or international symol on the following schematic diagram should be sealed with epoxy after rdplacement or adjustment.

**719B-3**



| No. | PART CODE | PART NAME | Q'TY | DESCRIPTION | REMARK |
|---|---|---|---|---|---|
| 34 | 9977713400 | SPACER CARD | 2 | NYLON 66 (DASC-6N) | |
| 33 | 9902802600 | LOCKING SPACER | 1 | NYLON 66 (DALS-12N) | |
| 32 | 9977241000 | SHIELD MPR TOP | 1 | AL T=0.5 | |
| 31 | 9977247400 | SHIELD COVER | 1 | SPTH 0.3T | |
| 30 | 9975426500 | LABEL RATING | 1 | PE T=0.1X98X78 | |
| 29 | 7173401411 | SCREW TAPTITE | 4 | TT2 BIN 4X14 MFZN | FRONT+REAR |
| 28 | 9972117000 | COVER REAR | 1 | FR-ABS GY-275A | |
| 27 | 7173301011 | SCREW TAPTITE | 2 | TT2 BIN 3X10 MFZN | FRONT+BUTTON TACT |
| 26 | 9976013200 | SPECIAL SCREW | 2 | TT2 BIN 3X10 MFZN PWø7 | + H/S 309 |
| 25 | 9977030900 | HEAT SINK 309 | 1 | AI0509-H24 | |
| 24 | 9975816100 | LABEL DHHS | 1 | ART PAPER 50X40 | |
| 23 | 9977247700 | SHIELD CASE | 1 | SPTH-C T=0.3 | |
| 22 | 9977610807 | INSULATION TAPE | 1 | 3M Transfer Tape 9882-1 | + H/S 254 |
| 21 | 9976013200 | SPECIAL SCREW | 4 | TT2 BIN 3X10 MFZN PW | + H/S 306 |
| 20 | 9977031300 | HEAT SINK 313 | 1 | AL T=2.0 | |
| 19 | 7178301011 | SCREW TAPTITE | 5 | TT2 WAS 3X10 MFZN | MAIN PCB+FRAME MAIN |
| 18 | 9977610807 | INSULATION TAPE | 1 | 3M Transfer Tape 9882-1 | + H/S 254 |
| 17 | 9977025406 | HEAT SINK 254 | 1 | AI0509-H24 H=30 | |
| 16 | 7178301011 | SCREW TAPTITE | 2 | TT2 WAS 3X10 MFZN | SHIELD SIDE+FRAME MAIN |
| 15 | 9977248000 | SHIELD SIDE | 1 | AL 0.5T | |
| 14 | 9976013200 | SPECIAL SCREW | 1 | TT2 BIN 3X10 MFZN PWø7 | + H/S 304 |
| 13 | 9977030400 | HEAT SINK 304 | 1 | AI0509-H24 T2.0 | |
| 12 | 7173401411 | SCREW TAPTITE | 2 | TT2 BIN 4X14 MFZN | FRONT+FRAME |
| 11 | 9973725701 | SUPPORT CRT L | 1 | FR ABS | |
| 10 | 9973725700 | SUPPORT CRT R | 1 | FR ABS | |
| 9 | 99729221A0 | BASE STAND AS | 1 | HIPS GY-275A (94-HB) | |
| 8 | 9974116500 | FRAME MAIN | 1 | E.G.I T=1.0 | |
| 7 | 9976012600 | SCREW SPECIAL 5 | 2 | TT2 HEX 5X21 MFZN SPW | CRT+FRONT |
| 6 | 9976013000 | SCREW SPECIAL 5 | 2 | TT2 HEX 5X21 SCREW+BAND | CRT+FRONT D-COIL WIRE |
| 5 | 9974824800 | BUTTON TACT | 1 | ABS GY-275A | |
| 4 | 9977920100 | LENS LED | 1 | ACRYL | |
| 3 | 9972021000 | COVER FRONT | 1 | FR-ABS GY-275A | |
| 2 | 9976712500 | SPRING | 1 | SUS 304 ø0.5 | |
| 1 | 9974824700 | BUTTON POWER | 1 | ABS GY-275A | |

**719BF-3**



| No. | PART CODE | PART NAME | Q'TY | DESCRIPTION | REMARK |
|---|---|---|---|---|---|
| 35 | 9975426800 | LABEL RATING | 1 | PE T=0.1X98X78 | |
| 34 | 7173401411 | SCREW TAPTITE | 4 | TT2 BIN 4X14 MFZN | FRONT+REAR |
| 33 | 9972117100 | COVER REAR | 1 | FR-ABS GY-275A | |
| 32 | 9977713400 | SPACER CARD | 2 | NYLON 66 (DASC-6N) | |
| 31 | 9977241000 | SHIELD MPR TOP | 1 | AL T=0.5 | |
| 30 | 9977247400 | SHIELD COVER | 1 | SPTH 0.3T | |
| 29 | 9976013200 | SPECIAL SCREW | 2 | TT2 BIN 3X10 MFZN PWø7 | + H/S 309 |
| 28 | 9977030900 | HEAT SINK 309 | 1 | AI0509-H24 | |
| 27 | 9975816100 | LABEL DHHS | 1 | ART PAPER 50X40 | |
| 26 | 9977247700 | SHIELD CASE | 1 | SPTH-C T=0.3 | |
| 25 | 9976013200 | SPECIAL SCREW | 4 | TT2 BIN 3X10 MFZN PW | + H/S 313 |
| 24 | 9977031300 | HEAT SINK 313 | 1 | AL T=2.0 | |
| 23 | 7178301011 | SCREW TAPTITE | 5 | TT2 WAS 3X10 MFZN | MAIN PCB+FRAME MAIN |
| 22 | 9977610807 | INSULATION TAPE | 1 | 3M Transfer Tape 9882-1 | + H/S 254 |
| 21 | 9977025406 | HEAT SINK 254 | 1 | AI0509-H24 H=30 | |
| 20 | 9976013200 | SPECIAL SCREW | 1 | TT2 BIN 3X10 MFZN PWø7 | + H/S 304 |
| 19 | 9977030400 | HEAT SINK 304 | 1 | AI0509-H24 T2.0 | |
| 18 | 7178301011 | SCREW TAPTITE | 2 | TT2 WAS 3X10 MFZN | SHIELD SIDE+FRAME MAIN |
| 17 | 9977248000 | SHIELD SIDE | 1 | AL 0.5T | |
| 16 | 7173401411 | SCREW TAPTITE | 2 | TT2 BIN 4X14 MFZN | FRONT+FRAME |
| 15 | 9973725800 | SUPPORT CRT L | 1 | FR-ABS | |
| 14 | 9973725801 | SUPPORT CRT R | 1 | FR-ABS | |
| 13 | 9972712900 | FOOT | 4 | NBR BLACK | |
| 12 | 9972924200 | SWIVEL TABLE | 1 | HIPS GY-275A (94-HB) | |
| 11 | 9972922100 | BASE STAND | 1 | HIPS GY-275A (94-HB) | |
| 10 | 9974116500 | FRAME MAIN | 1 | E.G.I T=1.0 | |
| 9 | 9976013700 | SCREW SPECIAL 5 | 2 | TT2 HEX 5X21 MFZN SPW | CRT+FRONT |
| 8 | 9976013800 | SCREW SPECIAL 5 | 2 | TT2 HEX 5X21 SCREW+BAND | CRT+FRONT D-COIL WIRE |
| 7 | 7178301011 | SCREW TAPTITE | 1 | TT2 WAS 3X10 MFZN | CONTROL PCB+FRONT |
| 6 | 9974825500 | BUTTON TACT B | 1 | ABS GY-275A | |
| 5 | 9974825400 | BUTTON TACT A | 1 | ABS GY-275A | SILVER SPRAY |
| 4 | 9977920500 | LENS LED | 1 | ACRYL | |
| 3 | 9972021400 | COVER FRONT | 1 | FR-ABS GY-275A | |
| 2 | 9976712500 | SPRING | 1 | SUS 304 ø0.5 | |
| 1 | 9974825600 | BUTTON POWER | 1 | ABS GY-275A | |

# INFORMATION OF PART DESCRIPTION

## Important Safety Notice

Components identified with the International Symbol have special characteristics important for safety. When replacing any components, use only manufacturer's specified parts.

## Abbreviation of Description

**RESISTOR Description**

| Allowance | |
|---|---|
| F | ± 1% |
| J | ± 5% |
| K | ± 10% |
| M | ± 20% |
| G | ± 2% |

**Example:**

| Fig & Index | Part No | Description |
|---|---|---|
| R101 | Resistors | |
| | RD-4Z820J | Carbon: 82J |
| R102 | RD-4Z201J | Carbon1/4W-200J |

**CAPACITOR Description**

| Allowance | |
|---|---|
| C | ± 0.25pF |
| D | ± 0.5% |
| F | ± 1pF |
| J | ± 5% |
| K | ± 10% |
| P | ± 100% ~ 0% |
| Z | ± 80% ~ – |

**Example:**

| Fig & Index | Part No | Description |
|---|---|---|
| | Capacitors | |
| C102 | CCXF1H104Z | Ceramic 50V 0.1µF Z |
| C402 | CCXB1H331K | Ceramic 50V 330PF K |
| C105 | CMXM 2A224J | MYLAR 100V 0.22µF J |

# ELECTRICAL PARTS LIST

The components identified by mark ⚠ have special characteristics important for safety and x-ray radiation. These should be replaced only with the types specified in the parts list.

## ◆ Parts List for 719B-3

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| BC005 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC201 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC202 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC203 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC204 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC205 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC206 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC207 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC208 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC209 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC210 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC401 | 5PB13890— | COIL BEAD | BI3890 |
| BC402 | 5PB13890— | COIL BEAD | BI3890 |
| BC403 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC404 | 5PB13857— | COIL BEAD | BI3857(AXIAL) |
| BC801 | 5PB13890— | COIL BEAD | BI3890 |
| BC802 | 5PB13890— | COIL BEAD | BI3890 |
| BC901 | 5PB13890— | COIL BEAD | BI3890 |
| ⚠ C001 | CL1UC3104M | C LINE ACROSS | WORLD AC250V 0.1UF M R.47 |
| C002 | CEYP2G221Z | C ELECTRO | 400V SMH 220MF (25.4*40) |
| C005 | CEXF1E101V | C ELECTRO | 25V RSS 100MF (6.3X11) TP |
| C006 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C007 | CCXB2H472K | C CERA | 500V B 4700PF K (TAPPING) |
| C008 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C010 | CMXM2A682J | C MYLAR | 100V 6800PF J (TP) |
| C012 | CMXM2A272J | C MYLAR | 100V 2700PF J (TP) |
| C013 | CCXB1H681K | C CERA | 50V B 680PF K (TAPPING) |
| C014 | CCXB3A221K | C CERA | 1KV B 220PF K (TAPPING) |
| C018 | CMXM2A224J | C MYLAR | 100V 0.22MF J |
| C020 | CMXM2A332J | C MYLAR | 100V 3300PF J (TP) |
| C024 | CH1FDF222M | C CERA AC | 2.5KV 2200PF M AC250V |
| ⚠ C025 | CH1FDF222M | C CERA AC | 2.5KV 2200PF M AC250V |
| ⚠ C026 | CH1FDF222M | C CERA AC | 2.5KV 2200PF M AC250V |
| ⚠ C027 | CL1UC3104M | C LINE ACROSS | WORLD AC250V 0.1UF M R.47 |
| C101 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C102 | CEXF1C101V | C ELECTRO | 16V RSS 100MF (6.3X11) TP |
| C103 | CMXM2A102J | C MYLAR | 100V 1000PF J (TP) |
| C104 | CCXB1H221K | C CERA | 50V B 220PF K (TAPPING) |
| C105 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C106 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C107 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C108 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C109 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C110 | CCXF1H104Z | C CERA | 50V F 0.1MF Z |
| C112 | CXCH1H560J | C CERA | 50V CH 56PF J (TAPPING) |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| C113 | CMXM2A102J | C MYLAR | 100V 1000PF J (TP) |
| C114 | CEXF1H109V | C ELECTRO | 50V RSS 1MF (5X11) TP |
| C115 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C204 | CMXM2A104J | C MYLAR | 100V 0.1MF J (TP) |
| C205 | CMXM2A104J | C MYLAR | 100V 0.1MF J (TP) |
| C206 | CMXM2A102J | C MYLAR | 100V 1000PF J (TP) |
| C207 | CMXM2A472J | C MYLAR | 100V 4700PF J (TP) |
| C209 | CCXB1H471K | C CERA | 50V B 470PF K (TAPPING) |
| C210 | CEXF1C470V | C ELECTRO | 16V RSS 47MF (5X11) TP |
| C211 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C212 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C222 | CEXF1C470V | C ELECTRO | 16V RSS 47MF (5X11) TP |
| C223 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C226 | CEXD2A109F | C ELECTRO | 100V RND 1MF(5*11) TP |
| C228 | CCXB2H102K | C CERA | 500V B 1000PF K (TAPPING) |
| C229 | CEXD2A109F | C ELECTRO | 100V RND 1MF(5*11) TP |
| C232 | CEXD2A109F | C ELECTRO | 100V RND 1MF(5*11) TP |
| C234 | CCXB3D102K | C CERA | 2KV B 1000PF K (TAPPING) |
| C235 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C236 | CEXF2A100V | C ELECTRO | 100V RSS 10MF (6.3X11) TP |
| C242 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C243 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C244 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C245 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C246 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C249 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C250 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C251 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C252 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C260 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C263 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C264 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C281 | CEXF1H109V | C ELECTRO | 50V RSS 1MF (5X11) TP |
| C302 | CMXM2A102J | C MYLAR | 100V 1000PF J (TP) |
| C303 | CEXF1C102V | C ELECTRO | 16V RSS 1000MF (10X20) TP |
| C304 | CMXM2A472J | C MYLAR | 100V 4700PF J (TP) |
| C305 | CEXF1V101V | C ELECTRO | 35V RSS 100MF (8X11.5) TP |
| C307 | CMXM2A224J | C MYLAR | 100V 0.22MF J |
| C308 | CEXF1C471V | C ELECTRO | 16V RSS 470MF (8X12)TP |
| C309 | CMXM2A473J | C MYLAR | 100V 0.047MF J (TP) |
| C401 | CCXF1H104Z | C CERA | 50V F 0.1MF Z |
| C402 | CEXF1C221V | C ELECTRO | 16V RSS 220MF (8X11.5) TP |
| C403 | CMXM2A154J | C MYLAR | 100V 0.15MF J (TP) |
| C404 | CMXL1J474J | C MYLAR | 63V MEU 0.47MF J |
| C405 | CEXF1C470V | C ELECTRO | 16V RSS 47MF (5X11) TP |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| C407 | CMXM2A104J | C MYLAR | 100V 0.1MF J (TP) |
| C408 | CMXM2A472J | C MYLAR | 100V 4700PF J (TP) |
| C409 | CMXD2A821J | C MYLAR | KD 100V 820PF J |
| C410 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C411 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C412 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C413 | CCXF1H103Z | C CERA | 50V F 0.01MF Z (TAPPING) |
| C414 | CEXF1C470V | C ELECTRO | 16V RSS 47MF (5X11) TP |
| C421 | CEXF1H109V | C ELECTRO | 50V RSS 1MF (5X11) TP |
| C422 | CMXM2A332J | C MYLAR | 100V 3300PF J (TP) |
| C424 | CMXE2J682J | C MYLAR | PL 630V 6800PF J (TP) |
| C426 | CMXM2A102J | C MYLAR | 100V 1000PF J (TP) |
| C428 | CCXB2H151K | C CERA | 500V B 150PF K (TAPPING) |
| C429 | CMYF2E684J | C MYLAR | 250V MPP 0.68MF J |
| C431 | CMXM2A472J | C MYLAR | 100V 4700PF J (TP) |
| C433 | CMYF2E105J | C MYLAR | MPP 250V 1MF J |
| C434 | CMXF2G394J | C MYLAR | MPP 400V 0.39MF J |
| C437 | CMXF2E224J | C MYLAR | MPP 250V 0.22MF J |
| C438 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C440 | CXCH1H100D | C CERA | 50V CH 10PF D (TAPPING) |
| C441 | CMXL1J105J | C MYLAR | 63V MEU 1MF J |
| C442 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C443 | CMXM2A223J | C MYLAR | 100V 0.022MF J TP |
| C444 | CEXF1C471V | C ELECTRO | 16V RSS 470MF (8X12)TP |
| C445 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C508 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |
| C509 | CMXM2A103J | C MYLAR | 100V 0.01MF J (TP) |
| C511 | CMXM2A102J | C MYLAR | 100V 1000PF J (TP) |
| C512 | CMXM2A222J | C MYLAR | 100V 2200PF J (TP) |
| ⚠ C521 | CMYH3E562J | C MYLAR | BUP 2.5KV 5600PF J BULK |
| C541 | CMXM2A473J | C MYLAR | 100V 0.047MF J (TP) |
| C821 | CCXB2H151K | C CERA | 500V B 150PF K (TAPPING) |
| C822 | CEXF2A221V | C ELECTRO | 100V RSS 220MF (16X25) TP |
| C824 | CEXF1C102V | C ELECTRO | 16V RSS 1000MF (10X20) TP |
| C825 | CEXF2A470V | C ELECTRO | 100V RSS 47MF (10X16) TP |
| C827 | CEXF1E471V | C ELECTRO | 25V RSS 470MF (10X16) TP |
| C828 | CEXF1C101V | C ELECTRO | 16V RSS 100MF (6.3X11) TP |
| C836 | CEXF1C101V | C ELECTRO | 16V RSS 100MF (6.3X11) TP |
| C839 | CEXF1C221V | C ELECTRO | 16V RSS 220MF (8X11.5) TP |
| C901 | CCXB2H151K | C CERA | 500V B 150PF K (TAPPING) |
| C902 | CMXE2E123J | C MYLAR | PL 250V 0.012MF J |
| C903 | CMXM2A222J | C MYLAR | 100V 2200PF J (TP) |
| C904 | CMXM2A473J | C MYLAR | 100V 0.047MF J (TP) |
| C905 | CCXB3A472K | C CERA | 1KV B 4700PF K (TAPPING) |
| C906 | CEXF2V109V | C ELECTRO | 350V RSS 1MF(8*11.5) |
| C907 | CEXF2C479V | C ELECTRO | 160V RSS 4.7MF (8X16) TP |
| C908 | CEXD1H478F | C ELECTRO | 50V RND 0.47MF (5X11) TP |
| C909 | CCXB2H102K | C CERA | 500V B 1000PF K (TAPPING) |
| C910 | CEXF1H479V | C ELECTRO | 50V RSS 4.7MF (5X11) TP |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| C913 | CMXM2A102J | C MYLAR | 100V 1000PF J (TP) |
| C915 | CEXF1C471V | C ELECTRO | 16V RSS 470MF (8X12)TP |
| C916 | CEXF1C470V | C ELECTRO | 16V RSS 47MF (5X11) TP |
| C917 | CCXF1H104Z | C CERA | 50V F 0.1MF Z |
| CDT | 9979617037 | CDT | M41KXU100XX021 (5X10(5)) |
| CGND | 9970710289 | CRT GND AS | 0.12*16*5+BL101+1015#22=730 |
| CN101 | 99707D0007 | CONN AS | SMH200-09/04+YBNH200-14+CORE+1007#26=260 |
| CN201 | 9970710288 | CONN ASS'Y | 101R+1310+CORE+1032#22=250 |
| ⚠ D001 | DRL205—— | DIODE | RL205 |
| ⚠ D002 | DRL205—— | DIODE | RL205 |
| ⚠ D003 | DRL205—— | DIODE | RL205 |
| ⚠ D004 | DRL205—— | DIODE | RL205 |
| D007 | D1N4937GP- | DIODE | 1N4937GP (TAPPING) |
| D008 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D009 | D1N4935GP- | DIODE | 1N4935GP |
| D101 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D104 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D105 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D108 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D109 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D201 | DBAV20—— | DIODE | BAV20 |
| D202 | DBAV20—— | DIODE | BAV20 |
| D203 | DBAV20—— | DIODE | BAV20 |
| D204 | DBAV20—— | DIODE | BAV20 |
| D205 | DBAV20—— | DIODE | BAV20 |
| D206 | DBAV20—— | DIODE | BAV20 |
| D207 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D208 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D209 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D210 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D211 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D212 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D213 | DBAV20—— | DIODE | BAV20 |
| D214 | DBAV20—— | DIODE | BAV20 |
| D215 | DBAV20—— | DIODE | BAV20 |
| D301 | D1N4002A— | DIODE | 1N4002 |
| D405 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D406 | DERD07-15- | DIODE | ERD07-15 |
| D407 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D408 | DDMV1500L- | DIODE | DMV-1500L |
| D410 | DUF1G——- | DIODE | UF1G |
| D411 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D413 | D1N4004—- | DIODE | 1N4004 |
| D560 | D1N4935GP- | DIODE | 1N4935GP |
| D801 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| D803 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| ⚠ D810 | D31DF4—— | DIODE | 31DF4 |
| ⚠ D812 | DUG2D——- | DIODE | UG2D 200V 2A |
| ⚠ D813 | DGUF10M—- | DIODE | GUF10M |

| | LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|---|
| ⚠ | D814 | DUG2D——- | DIODE | UG2D 200V 2A |
| | D816 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | D901 | DUG1D——- | DIODE | UG1D |
| | D903 | D1N4937GP- | DIODE | 1N4937GP (TAPPING) |
| | D904 | D1N4937GP- | DIODE | 1N4937GP (TAPPING) |
| | D905 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| | D906 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| | D907 | DRP1H——- | DIODE | RP1H |
| | D908 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| | D911 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| | D912 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| | D913 | DZN4148—- | DIODE | 1N4148 AUTO 52MM |
| | D915 | DUG1D——- | DIODE | UG1D |
| | DG001 | 5MG0000071 | COIL DEGAUSSING | DG-719BW-TG |
| | E1 | 9977916901 | EYE LET | BSR T0.2 (R2.0) |
| | E2 | 9977916901 | EYE LET | BSR T0.2 (R2.0) |
| | E3 | 9977916901 | EYE LET | BSR T0.2 (R2.0) |
| | E4 | 9977916901 | EYE LET | BSR T0.2 (R2.0) |
| | E5 | 9977916901 | EYE LET | BSR T0.2 (R2.0) |
| | EMI1 | 9970710291 | CONN AS | 0.12*3*16(P)+35072-9712+250REC-1=130 |
| | EMI2 | 9970710292 | CONN AS | 0.12*3*16(P)+35072-0910=110 |
| | EMI4 | 9970710279 | CONN AS | 35068-9812+0.16*3*16+35072-9712=200 |
| ⚠ | F001 | 5FSPS3152L | FUSE | SR-5 3.15A 250V (RADIAL) |
| | IC001 | 1KA3842B— | IC POWER | KA3842B |
| | IC101 | 1S3F8647— | IC MICOM | S3F8647 |
| | IC102 | 1CAT24WC8P | IC EEPROM | CAT24WC08P |
| ⚠ | IC201 | 1LM12371— | IC VIDEO PREAMP | LM1237 BDBC/NA |
| | IC203 | 1LM2445—- | IC VIDEO OUTPUT | LM2445 |
| | IC204 | 1LM2480—- | IC VIDEO CLAMP | LM2480 |
| | IC301 | 1STV9302A- | IC V-OUT | STV9302A |
| ⚠ | IC501 | 1STV6888— | IC H-OSC | STV6888 |
| | J001 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J002 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J003 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J004 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J005 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J007 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J008 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J009 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J010 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J011 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J012 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J013 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J014 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J016 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J017 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J018 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J019 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| | J020 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| J021 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J022 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J023 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J024 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J025 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J026 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J028 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J029 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J030 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J031 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J032 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J033 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J034 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J035 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J036 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J037 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J039 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J040 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J041 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J042 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J043 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J044 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J045 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J046 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J047 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J048 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J050 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J051 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J052 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J053 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J054 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J055 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J056 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J057 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J058 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J059 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J060 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J061 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J063 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J064 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J065 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J066 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J067 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J068 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J069 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J201 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J202 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J203 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J204 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| J205 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J206 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J207 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J208 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| J209 | 85801065GY | WIRE COPPER | AWG22 1/0.65 TIN COATING |
| ⚠ L001 | 5PDLF2445L | FILTER LINE | DLF-2445L |
| L203 | 5CPZ568K03 | COIL PEAKING | 0.56UH K (AXIAL 7MM) |
| L204 | 5CPZ568K03 | COIL PEAKING | 0.56UH K (AXIAL 7MM) |
| L205 | 5CPZ568K03 | COIL PEAKING | 0.56UH K (AXIAL 7MM) |
| L401 | 5CPZ101K03 | COIL PEAKING | 100UH K (AXIAL 7MM) |
| L402 | 5MC0000100 | COIL CHOKE | CH-180 |
| L403 | 5MC0000104 | COIL CHOKE | CH-100 |
| L901 | 5MH0000094 | COIL H-LINEARITY | TRL-719B-3 |
| LED01 | DSV50G—— | LED | SV50-R32BA570GG(GREEN) |
| MEI3 | 9970710293 | CONN AS | 1015#22+CLIP=100/50/65 |
| ⚠ P001 | 9979200320 | SOCKET AC INLET | BCP-03A-44 |
| P002 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P003 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P101 | 9979220102 | CONN WAFER | SMW200-07/68162-0710 |
| P102 | 9979220098 | CONN WAFER | SMW200-03/68162-0310 |
| P201 | 9979220087 | CONN WAFER | SMAW200-06/68163-0610 |
| P202 | 9979220090 | CONN WAFER | SMAW200-09/68163-0910 |
| P203 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P204 | 9979220085 | CONN WAFER | SMAW200-04/68163-0410 |
| P401 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P402 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P403 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P404 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P901 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P902 | 9976411500 | PIN B | DA-IB0214(D2.3/DY PIN) |
| P902A | 9970710286 | CONN AS | 101R+1015#18=400 |
| PCB1 | 9979800608 | PCB MAIN | T=1.6*246*247 |
| PCB2 | 9979800609 | PCB CRT | T=1.6*94*110 |
| ⚠ PR003 | DECPAC140M | POSISTOR | ECPAC140M290 |
| ⚠ Q001 | TSSS6N70A- | FET | SSS6N70A |
| Q105 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q402 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q404 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q405 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) |
| Q406 | TKSD1616Y- | TR | KSD1616Y |
| ⚠ Q407 | T2SC5404— | TR H-OUTPUT | T2SC5404 |
| Q408 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q409 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) |
| ⚠ Q410 | T1RFS630B- | FET | IRFS630B |
| Q412 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q413 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q415 | T1RF630B— | FET | IRF630B |
| Q416 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) |
| Q417 | TZTA1266Y- | TR | KTA1266Y- (AUTO)(1015Y) |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| Q418 | TKTD2061— | TR | KTD2061 |
| Q801 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q803 | TKSD1616Y- | TR | KSD1616Y |
| Q805 | TKSB1116Y- | TR | KSB1116Y |
| Q806 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| Q807 | TKSD1616Y- | TR | KSD1616Y |
| Q901 | TKSP44—— | TR | KSP44 |
| Q903 | TMPSA92—- | TR | MPSA92 |
| Q904 | TKSD1616Y- | TR | KSD1616Y |
| Q905 | TZTC3198Y- | TRANSISTOR | KTC3198Y-(1815Y) (AUTO) |
| ⚠ R001 | RD-2Z105J- | R CARBON FILM | 1/2 1M OHM J |
| R002 | RD-AZ363J- | R CARBON FILM | 1/6 36K OHM J |
| R003 | RS01Z333JS | R M-OXIDE FILM | 1W 33K OHM J SMALL |
| R004 | RS01Z333JS | R M-OXIDE FILM | 1W 33K OHM J SMALL |
| R005 | RS01Z333JS | R M-OXIDE FILM | 1W 33K OHM J SMALL |
| R007 | RD-AZ560J- | R CARBON FILM | 1/6 56 OHM J |
| R008 | RD-AZ471J- | R CARBON FILM | 1/6 470 OHM J |
| R009 | RS01Z104JS | R M-OXIDE FILM | 1W 100K OHM J SMALL |
| R010 | RS01Z104JS | R M-OXIDE FILM | 1W 100K OHM J SMALL |
| R011 | RD-AZ224J- | R CARBON FILM | 1/6 220K OHM J |
| R012 | RD-AZ330J- | R CARBON FILM | 1/6 33 OHM J |
| R013 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R014 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R015 | RS02Z338JS | R M-OXIDE FILM | 2W 0.33 OHM J SMALL |
| R016 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J |
| ⚠ R017 | RN-AZ1503F | R METAL FILM | 1/6 150K OHM F |
| R024 | RD-AZ154J- | R CARBON FILM | 1/6 150K OHM J |
| ⚠ R026 | RN-AZ3302F | R METAL FILM | 1/6 33K OHM F |
| R027 | RD-4Z560J- | R CARBON FILM | 1/4 56 OHM J |
| R101 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R102 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R103 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R104 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R105 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R108 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R109 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R110 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R111 | RD-AZ152J- | R CARBON FILM | 1/6 1.5K OHM J |
| R112 | RD-AZ152J- | R CARBON FILM | 1/6 1.5K OHM J |
| R114 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R115 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R116 | RD-AZ221J- | R CARBON FILM | 1/6 220 OHM J |
| R117 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R118 | RD-AZ222J- | R CARBON FILM | 1/6 2.2K OHM J |
| R119 | RD-AZ222J- | R CARBON FILM | 1/6 2.2K OHM J |
| R124 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R130 | RD-AZ472J- | R CARBON FILM | 1/6 4.7K OHM J |
| R135 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R160 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| R161 | RD-AZ122J- | R CARBON FILM | 1/6 1.2K OHM J |
| R162 | RD-AZ272J- | R CARBON FILM | 1/6 2.7K OHM J |
| R163 | RD-AZ512J- | R CARBON FILM | 1/6 5.1K OHM J |
| R164 | RD-AZ822J- | R CARBON FILM | 1/6 8.2K OHM J |
| R201 | RD-AZ331J- | R CARBON FILM | 1/6 330 OHM J |
| R202 | RD-AZ750J- | R CARBON FILM | 1/6 75 OHM J |
| R203 | RD-AZ750J- | R CARBON FILM | 1/6 75 OHM J |
| R204 | RD-AZ750J- | R CARBON FILM | 1/6 75 OHM J |
| R205 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R206 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R207 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R208 | RD-AZ622J- | R CARBON FILM | 1/6 6.2K OHM J |
| R209 | RD-AZ330J- | R CARBON FILM | 1/6 33 OHM J |
| R210 | RD-AZ330J- | R CARBON FILM | 1/6 33 OHM J |
| R211 | RD-AZ330J- | R CARBON FILM | 1/6 33 OHM J |
| R213 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R214 | RD-AZ334J- | R CARBON FILM | 1/6 330K OHM J |
| R215 | RD-AZ334J- | R CARBON FILM | 1/6 330K OHM J |
| R219 | RD-AZ334J- | R CARBON FILM | 1/6 330K OHM J |
| R221 | RD-AZ332J- | R CARBON FILM | 1/6 3.3K OHM J |
| R234 | RD-AZ220J- | R CARBON FILM | 1/6 22 OHM J |
| R236 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R237 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R238 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R248 | RD-4Z151J- | R CARBON FILM | 1/4 150 OHM J |
| R250 | RD-4Z151J- | R CARBON FILM | 1/4 150 OHM J |
| R251 | RD-4Z151J- | R CARBON FILM | 1/4 150 OHM J |
| R259 | RD-4Z330J- | R CARBON FILM | 1/4 33 OHM J |
| R260 | RD-4Z330J- | R CARBON FILM | 1/4 33 OHM J |
| R261 | RD-4Z330J- | R CARBON FILM | 1/4 33 OHM J |
| R262 | RD-2Z102J- | R CARBON FILM | 1/2 1K OHM J |
| R301 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R302 | RN-4Z1808F | R METAL FILM | 1/4 1.8 OHM F |
| R303 | RN-AZ5601F | R METAL FILM | 1/6 5.6K OHM F |
| R304 | RN-AZ5601F | R METAL FILM | 1/6 5.6K OHM F |
| R306 | RD-4Z229J- | R CARBON FILM | 1/4 2.2 OHM J |
| R307 | RN-4Z2008F | R METAL FILM | 1/4 2 OHM F |
| R309 | RD-2Z181J- | R CARBON FILM | 1/2 180 OHM J |
| R310 | RD-4Z159J- | R CARBON FILM | 1/4 1.5 OHM J |
| R311 | RN-AZ3602F | R METAL FILM | 1/6 36.0K OHM F |
| R312 | RD-4Z229J- | R CARBON FILM | 1/4 2.2 OHM J |
| R316 | RN-AZ1002F | R METAL FILM | 1/6 10K OHM F |
| R317 | RD-AZ223J- | R CARBON FILM | 1/6 22K OHM J |
| R401 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R402 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R403 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R405 | RD-AZ272J- | R CARBON FILM | 1/6 2.7K OHM J |
| R406 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R407 | RD-AZ225J- | R CARBON FILM | 1/6 2.2M OHM J |

| LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|
| R408 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R409 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R410 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R411 | RN-AZ6401F | R METAL FILM | 1/6 6.4K OHM F |
| R412 | RD-AZ332J- | R CARBON FILM | 1/6 3.3K OHM J |
| R414 | RD-AZ223J- | R CARBON FILM | 1/6 22K OHM J |
| R415 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R421 | RD-AZ475J- | R CARBON FILM | 1/6 4.7M OHM J |
| R423 | RD-4Z220J- | R CARBON FILM | 1/4 22 OHM J |
| R425 | RD-AZ624J- | R CARBON FILM | 1/6 620K OHM J |
| R429 | RD-2Z270J- | R CARBON FILM | 1/2 27 OHM J |
| R431 | RS01Z121JS | R M-OXIDE FILM | 1W 120 OHM J SMALL |
| R434 | RS01Z121JS | R M-OXIDE FILM | 1W 120 OHM J SMALL |
| R435 | RS01Z121JS | R M-OXIDE FILM | 1W 120 OHM J SMALL |
| R436 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| R437 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R438 | RD-2Z151J- | R CARBON FILM | 1/2 150 OHM J |
| R439 | RD-4Z220J- | R CARBON FILM | 1/4 22 OHM J |
| R440 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R441 | RD-AZ330J- | R CARBON FILM | 1/6 33 OHM J |
| R442 | RD-AZ223J- | R CARBON FILM | 1/6 22K OHM J |
| R443 | RS01Z828JS | R M-OXIDE FILM | 1W 0.82 OHM J SMALL |
| R444 | RS01Z828JS | R M-OXIDE FILM | 1W 0.82 OHM J SMALL |
| R445 | RD-AZ105J- | R CARBON FILM | 1/6 1M OHM J |
| R446 | RD-2Z472J- | R CARBON FILM | 1/2 4.7K OHM J |
| R447 | RD-2Z472J- | R CARBON FILM | 1/2 4.7K OHM J |
| R449 | RD-AZ472J- | R CARBON FILM | 1/6 4.7K OHM J |
| R451 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R452 | RD-AZ472J- | R CARBON FILM | 1/6 4.7K OHM J |
| R453 | RD-AZ479J- | R CARBON FILM | 1/6 4.7 OHM J |
| R456 | RD-4Z473J- | R CARBON FILM | 1/4 47K OHM J |
| R457 | RD-AZ273J- | R CARBON FILM | 1/6 27K OHM J |
| R458 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| R459 | RD-AZ563J- | R CARBON FILM | 1/6 56K OHM J |
| R460 | RD-AZ223J- | R CARBON FILM | 1/6 22K OHM J |
| R461 | RD-4Z681J- | R CARBON FILM | 1/4 680 OHM J |
| R462 | RD-4Z102J- | R CARBON FILM | 1/4 1K OHM J |
| R463 | RN-AZ1002F | R METAL FILM | 1/6 10K OHM F |
| R464 | RD-AZ184J- | R CARBON FILM | 1/6 180K OHM J |
| R465 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R466 | RD-4Z184J- | R CARBON FILM | 1/4 180K OHM J |
| R467 | RD-2Z229J- | R CARBON FILM | 1/2 2.2 OHM J |
| R468 | RD-AZ222J- | R CARBON FILM | 1/6 2.2K OHM J |
| R469 | RD-AZ822J- | R CARBON FILM | 1/6 8.2K OHM J |
| R470 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| R507 | RD-AZ272J- | R CARBON FILM | 1/6 2.7K OHM J |
| R508 | RN-AZ4303F | R METAL FILM | 1/6 430K OHM F |
| R512 | RD-AZ564J- | R CARBON FILM | 1/6 560K OHM J |
| R514 | RN-AZ2202F | R METAL FILM | 1/6 22K OHM F |

| | LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|---|
| ⚠ | R515 | RN-AZ1003F | R METAL FILM | 1/6 100K OHM F |
| ⚠ | R516 | RD-AZ334J- | R CARBON FILM | 1/6 330K OHM J |
| | R518 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| ⚠ | R552 | RN-AZ1203F | R METAL FILM | 1/6 120.0K OHM F |
| | R801 | RD-AZ472J- | R CARBON FILM | 1/6 4.7K OHM J |
| | R802 | RD-4Z470J- | R CARBON FILM | 1/4 47 OHM J |
| | R807 | RD-4Z823J- | R CARBON FILM | 1/4 82K OHM J |
| | R824 | RD-2Z560J- | R CARBON FILM | 1/2 56 OHM J |
| | R825 | RD-AZ102J- | R CARBON FILM | 1/6 1K OHM J |
| | R826 | RD-4Z562J- | R CARBON FILM | 1/4 5.6K OHM J |
| | R827 | RD-4Z109J- | R CARBON FILM | 1/4 1 OHM J |
| | R828 | RD-4Z154J- | R CARBON FILM | 1/4 150K OHM J |
| | R829 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| | R830 | RD-4Z220J- | R CARBON FILM | 1/4 22 OHM J |
| | R831 | RD-4Z681J- | R CARBON FILM | 1/4 680 OHM J |
| | R832 | RD-4Z202J- | R CARBON FILM | 1/4 2K OHM J |
| | R833 | RD-AZ222J- | R CARBON FILM | 1/6 2.2K OHM J |
| | R835 | RD-2Z569J- | R CARBON FILM | 1/2 5.6 OHM J |
| | R836 | RD-4Z229J- | R CARBON FILM | 1/4 2.2 OHM J |
| | R837 | RD-AZ101J- | R CARBON FILM | 1/6 100 OHM J |
| | R901 | RD-2Z151J- | R CARBON FILM | 1/2 150 OHM J |
| | R902 | RD-2Z151J- | R CARBON FILM | 1/2 150 OHM J |
| | R903 | RD-2Z560J- | R CARBON FILM | 1/2 56 OHM J |
| | R904 | RD-4Z331J- | R CARBON FILM | 1/4 330 OHM J |
| | R905 | RD-4Z224J- | R CARBON FILM | 1/4 220K OHM J |
| | R906 | RD-AZ244J- | R CARBON FILM | 1/6 240K OHM J |
| | R907 | RD-AZ122J- | R CARBON FILM | 1/6 1.2K OHM J |
| | R908 | RD-AZ183J- | R CARBON FILM | 1/6 18K OHM J |
| | R909 | RD-4Z223J- | R CARBON FILM | 1/4 22K OHM J |
| | R910 | RD-4Z223J- | R CARBON FILM | 1/4 22K OHM J |
| | R913 | RD-4Z104J- | R CARBON FILM | 1/4 100K OHM J |
| | R914 | RD-AZ223J- | R CARBON FILM | 1/6 22K OHM J |
| | R915 | RD-4Z304J- | R CARBON FILM | 1/4 300K OHM J |
| | R916 | RD-4Z224J- | R CARBON FILM | 1/4 220K OHM J |
| | R917 | RD-4Z224J- | R CARBON FILM | 1/4 220K OHM J |
| | R918 | RD-4Z105J- | R CARBON FILM | 1/4 1M OHM J |
| | R919 | RD-4Z105J- | R CARBON FILM | 1/4 1M OHM J |
| | R920 | RD-AZ222J- | R CARBON FILM | 1/6 2.2K OHM J |
| | R921 | RD-4Z102J- | R CARBON FILM | 1/4 1K OHM J |
| | R922 | RD-4Z394J- | R CARBON FILM | 1/4 390K OHM J |
| | R923 | RD-AZ223J- | R CARBON FILM | 1/6 22K OHM J |
| | R924 | RD-AZ472J- | R CARBON FILM | 1/6 4.7K OHM J |
| | R925 | RD-4Z153J- | R CARBON FILM | 1/4 15K OHM J |
| | R926 | RD-AZ123J- | R CARBON FILM | 1/6 12K OHM J |
| | R927 | RD-AZ154J- | R CARBON FILM | 1/6 150K OHM J |
| | R928 | RD-AZ104J- | R CARBON FILM | 1/6 100K OHM J |

| | LOC | PART-CODE | PART-NAME | PART-DESC |
|---|---|---|---|---|
| | R929 | RD-AZ103J- | R CARBON FILM | 1/6 10K OHM J |
| | R930 | RD-AZ562J- | R CARBON FILM | 1/6 5.6K OHM J |
| | R936 | RD-AZ333J- | R CARBON FILM | 1/6 33K OHM J |
| | R937 | RD-AZ432J- | R CARBON FILM | 1/6 4.3K OHM J |
| | RL001 | 5SC0101035 | SW RELAY | DY3MA-DC12V 1C-1P |
| | RL401 | 5SC0101035 | SW RELAY | DY3MA-DC12V 1C-1P |
| | RS101 | 5PZTT120MT | RESONATOR CERA | ZTT12.0MT |
| | SC01 | 9970800068 | CABLE SIGNAL AS | 15P+2C/DDC+421C=1.5M |
| | SG201 | DWSP201M— | SURGE ABSORBER | WSP-201M |
| | SG202 | DWSP201M— | SURGE ABSORBER | WSP-201M |
| | SG203 | DWSP201M— | SURGE ABSORBER | WSP-201M |
| | SG204 | DWSP301M— | SURGE ABSORBER | WSP-301M |
| | SG205 | 4SG0D00104 | SPARK GAP | S-23 1.5KV |
| | SG901 | 4SG0D00104 | SPARK GAP | S-23 1.5KV |
| | SK201 | 9979300008 | SOCKET CRT | 033 0 7700 44(ISDW-16S) |
| | SW101 | 5S50101Z01 | SW TACT | KPT-1115VM 1C-1P |
| | SW102 | 5S50101Z01 | SW TACT | KPT-1115VM 1C-1P |
| | SW103 | 5S50101Z01 | SW TACT | KPT-1115VM 1C-1P |
| | SW104 | 5S50101Z01 | SW TACT | KPT-1115VM 1C-1P |
| | SW105 | 5S50101Z01 | SW TACT | KPT-1115VM 1C-1P |
| | SW106 | 5S50101Z01 | SW TACT | KPT-1115VM 1C-1P |
| | T001 | 5RM0000119 | TRANS SMPS | DMT-719B-3 |
| | T401 | 5RM0000121 | TRANS DRIVE | DDT-719B-3 |
| ⚠ | T500 | 5RH0000147 | FBT | KJF-0301A |
| | T902 | 5RM0000120 | TRANS DYNAMIC FOCUS | DYT-719B-3 |
| ⚠ | TH001 | DTP8D13—- | THERMISTOR | TP8D13 |
| | YF010 | 99720210A0 | COVER FRONT AS | CMC-719B C/FRONT AS |
| | YM010 | 99741165A0 | FRAME MAIN AS | CMC-719B FRAME MAIN AS |
| | YP020 | 9978136900 | CUSHION | E.P.S |
| | YP030 | 9978043279 | BOX CARTON | DW-3 (DECA) DW |
| | YP090 | 99729221A0 | BASE STAND AS | HIPS GY-275A(94-HB) |
| | YR010 | 9972117000 | COVER REAR | FR-ABS GY-275A |
| | ZD101 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |
| | ZD102 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |
| | ZD201 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |
| | ZD202 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |
| | ZD203 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |
| | ZD204 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |
| | ZD301 | DDZ22BM—- | DIODE ZENER | DZ22BM |
| | ZD400 | DDZ12BM—- | DIODE ZENER | DZ12BM |
| | ZD401 | DDZ12BM—- | DIODE ZENER | DZ12BM |
| | ZD402 | DDZ12BM—- | DIODE ZENER | DZ12BM |
| | ZD501 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |
| | ZD803 | DDZ5R6BM— | DIODE ZENER | DZ5.6BM |
| | ZD901 | DDZ5R1B—- | DIODE ZENER | DZ-5.1B |

## ◆ Difference Components List Between 719B-3 and 719BF-3

| LOC. | 719B-3 | | 719BF-3 | |
|---|---|---|---|---|
| | Part No. | Part Description | Part No. | Part Description |
| CDT | 9979617041 | M41KXU200XX021 | 9979617081 | M41QEC200XX021 |
| R468 | RD-AZ302J | 1/6W 3K ohm | RD-AZ222J- | 1/6W 2.2K ohm |